FIG.1

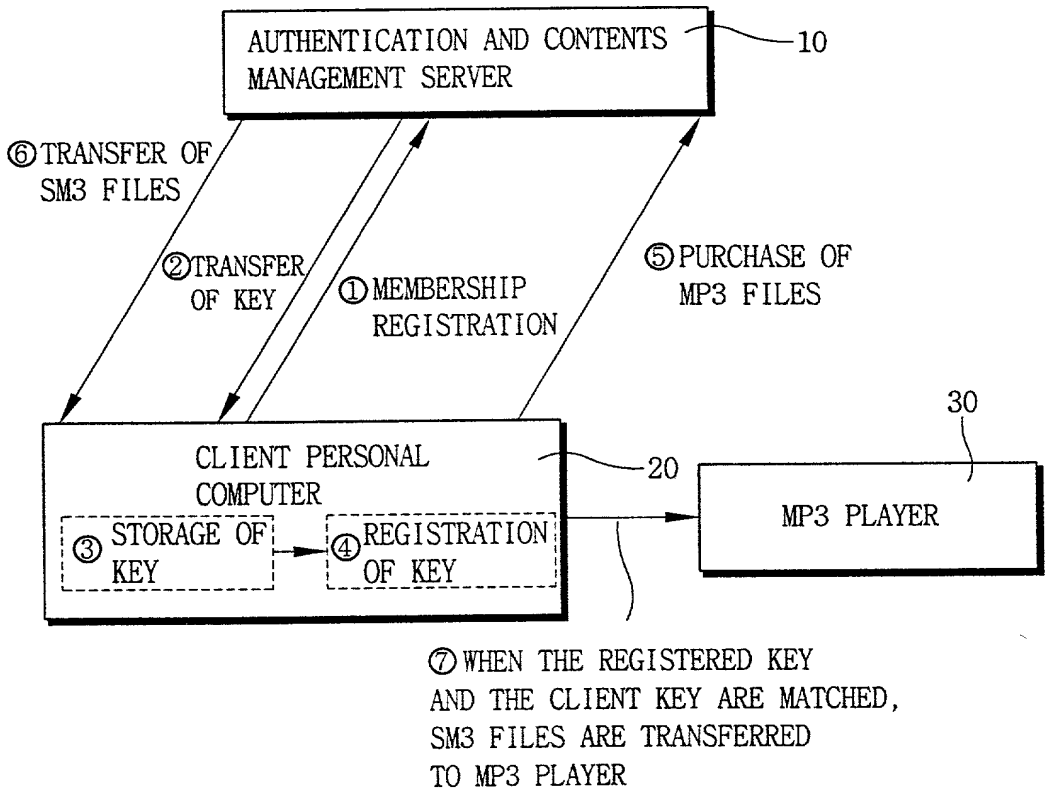
AUTHENTICATION AND CONTENTS MANAGEMENT SERVER
10
⑥TRANSFER OF SM3 FILES
②TRANSFER OF KEY
①MEMBERSHIP REGISTRATION
⑤PURCHASE OF MP3 FILES
30
CLIENT PERSONAL COMPUTER
20
③ STORAGE OF KEY
④REGISTRATION OF KEY
MP3 PLAYER
⑦WHEN THE REGISTERED KEY AND THE CLIENT KEY ARE MATCHED, SM3 FILES ARE TRANSFERRED TO MP3 PLAYER

FIG.2

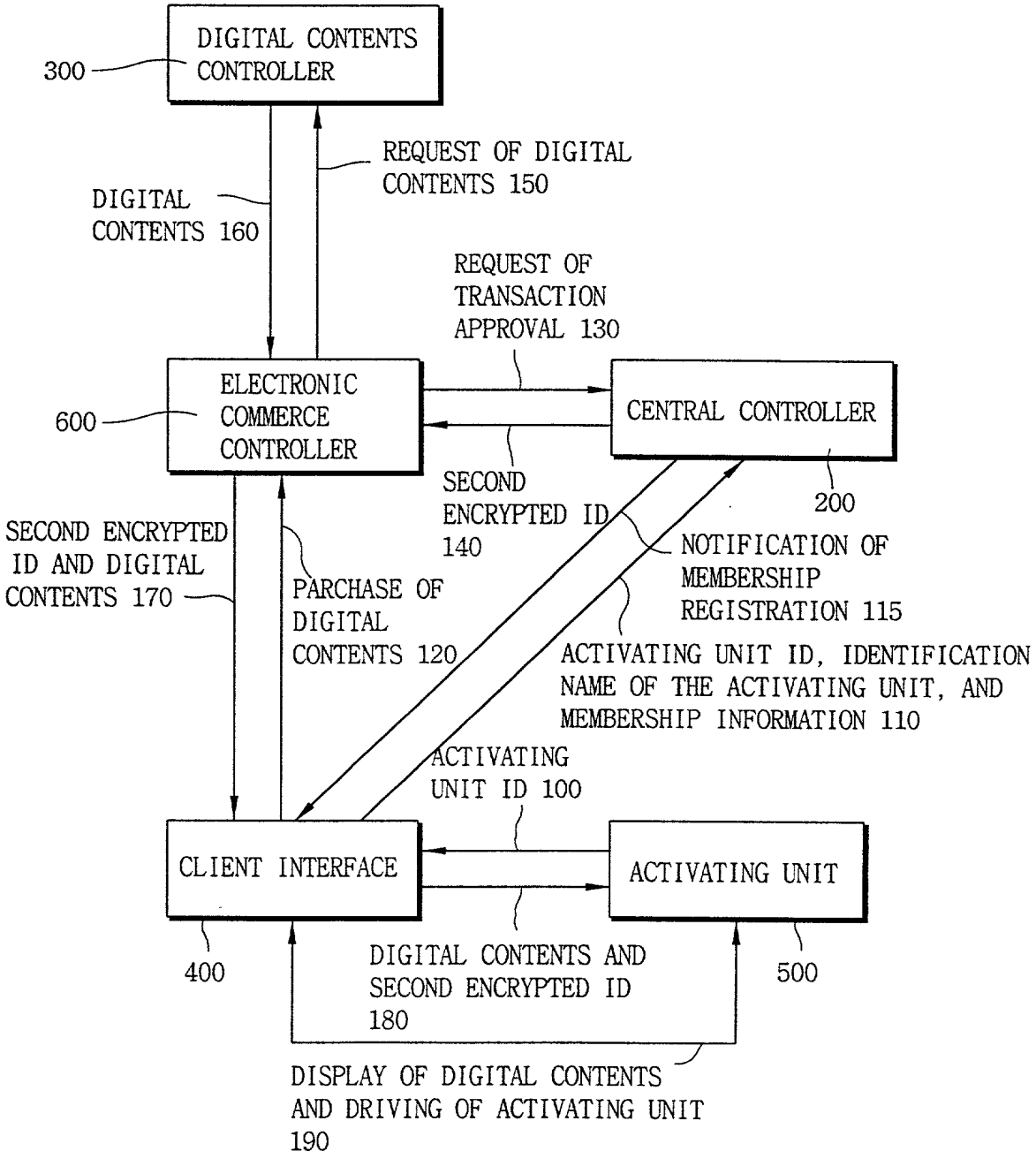

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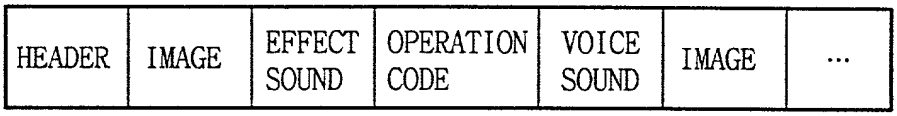
FIG.3

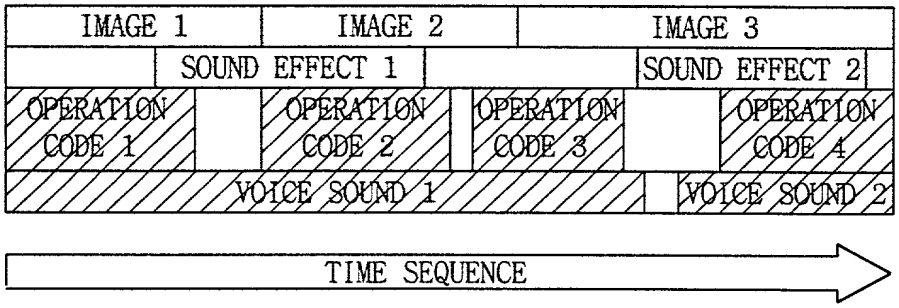
(a)

DATA TO BE EXECUTED IN THE CLIENT INTERFACE	DATA TO BE EXECUTED IN THE ACTIVATING UNIT
VISUAL(IMAGE,TEXT) EFFECT SOUND	OPERATION CODE VOICE SOUND

(b)



(c)



(d)

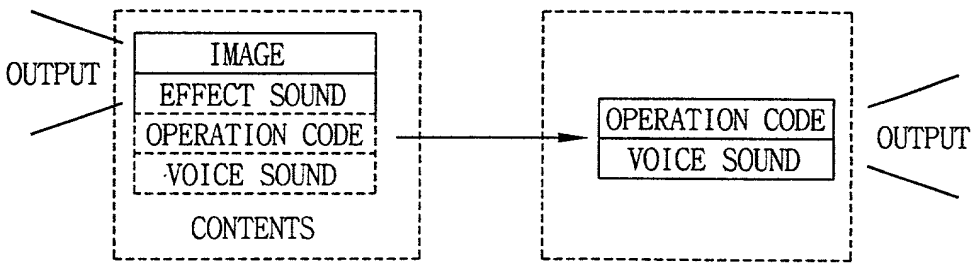


FIG.4

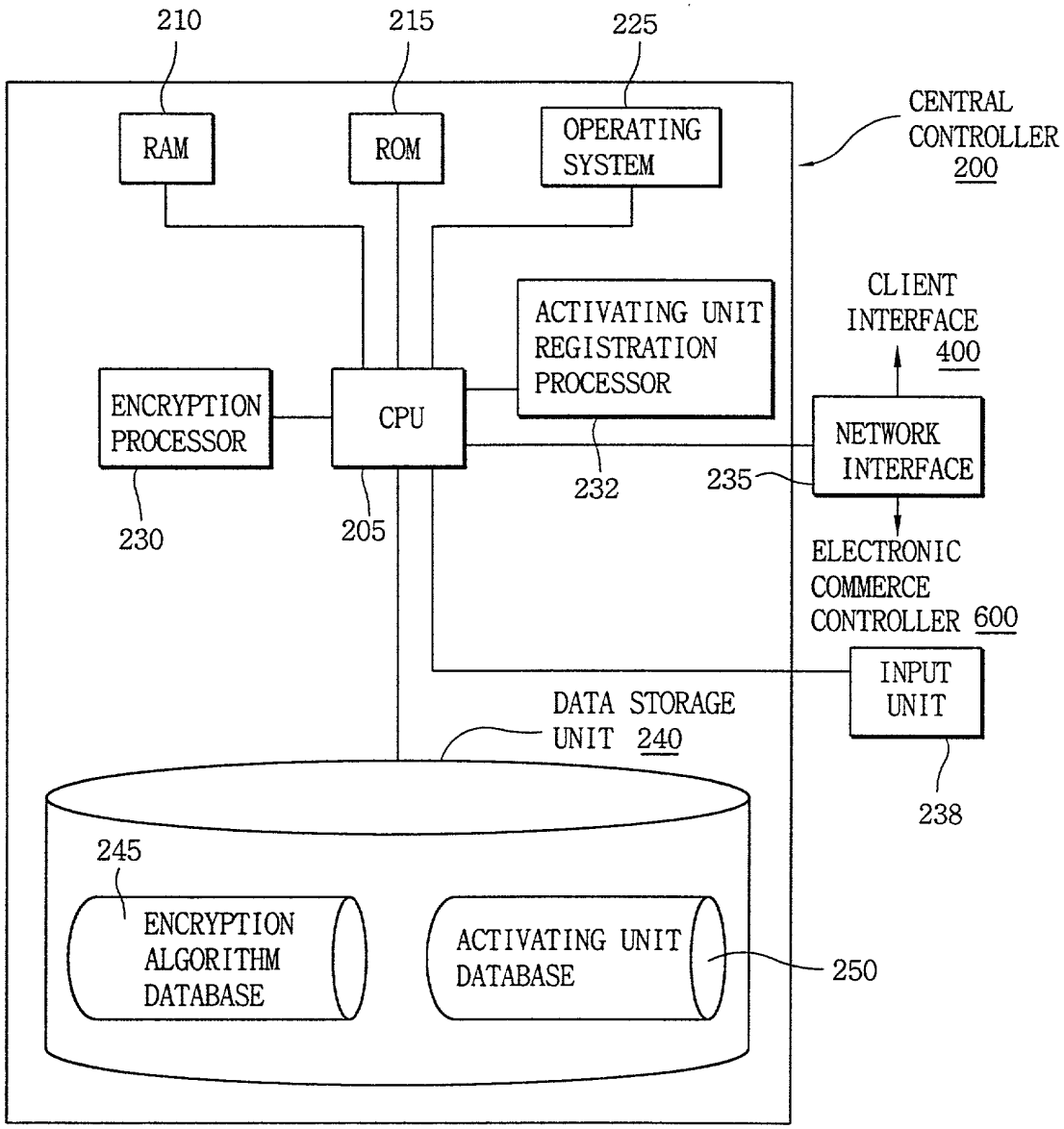

210
215
225
RAM
ROM
OPERATING SYSTEM
CENTRAL CONTROLLER 200
ACTIVATING UNIT REGISTRATION PROCESSOR
CLIENT INTERFACE 400
ENCRYPTION PROCESSOR
CPU
NETWORK INTERFACE
232
235
230
205
ELECTRONIC COMMERCE CONTROLLER 600
INPUT UNIT
DATA STORAGE UNIT 240
238
245
ENCRYPTION ALGORITHM DATABASE
ACTIVATING UNIT DATABASE
250

FIG.5

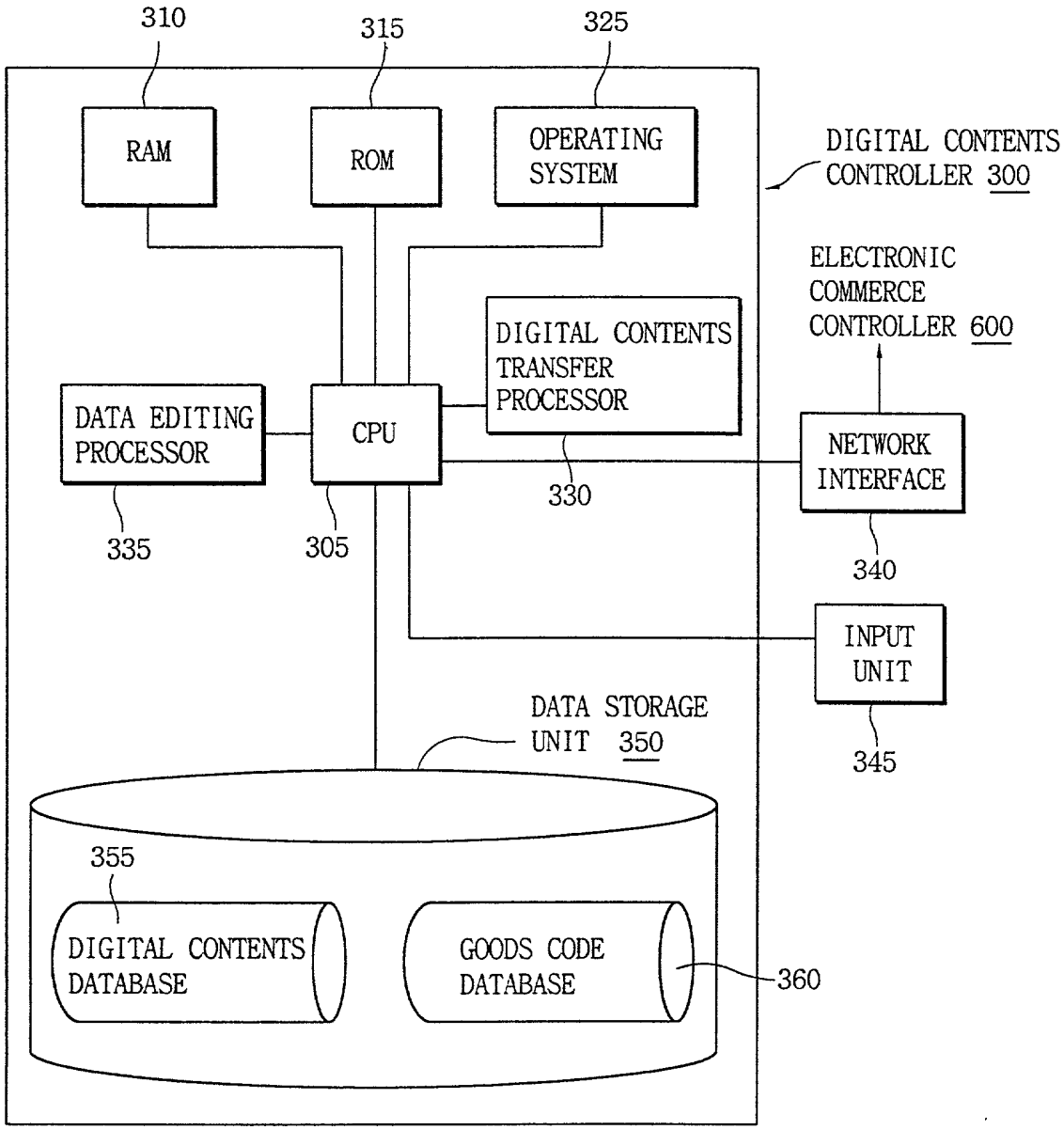

310
315
325
RAM
ROM
OPERATING SYSTEM
DIGITAL CONTENTS CONTROLLER 300
ELECTRONIC COMMERCE CONTROLLER 600
DIGITAL CONTENTS TRANSFER PROCESSOR
DATA EDITING PROCESSOR
CPU
NETWORK INTERFACE
330
335
305
340
INPUT UNIT
345
DATA STORAGE UNIT 350
355
DIGITAL CONTENTS DATABASE
GOODS CODE DATABASE
360

FIG.6

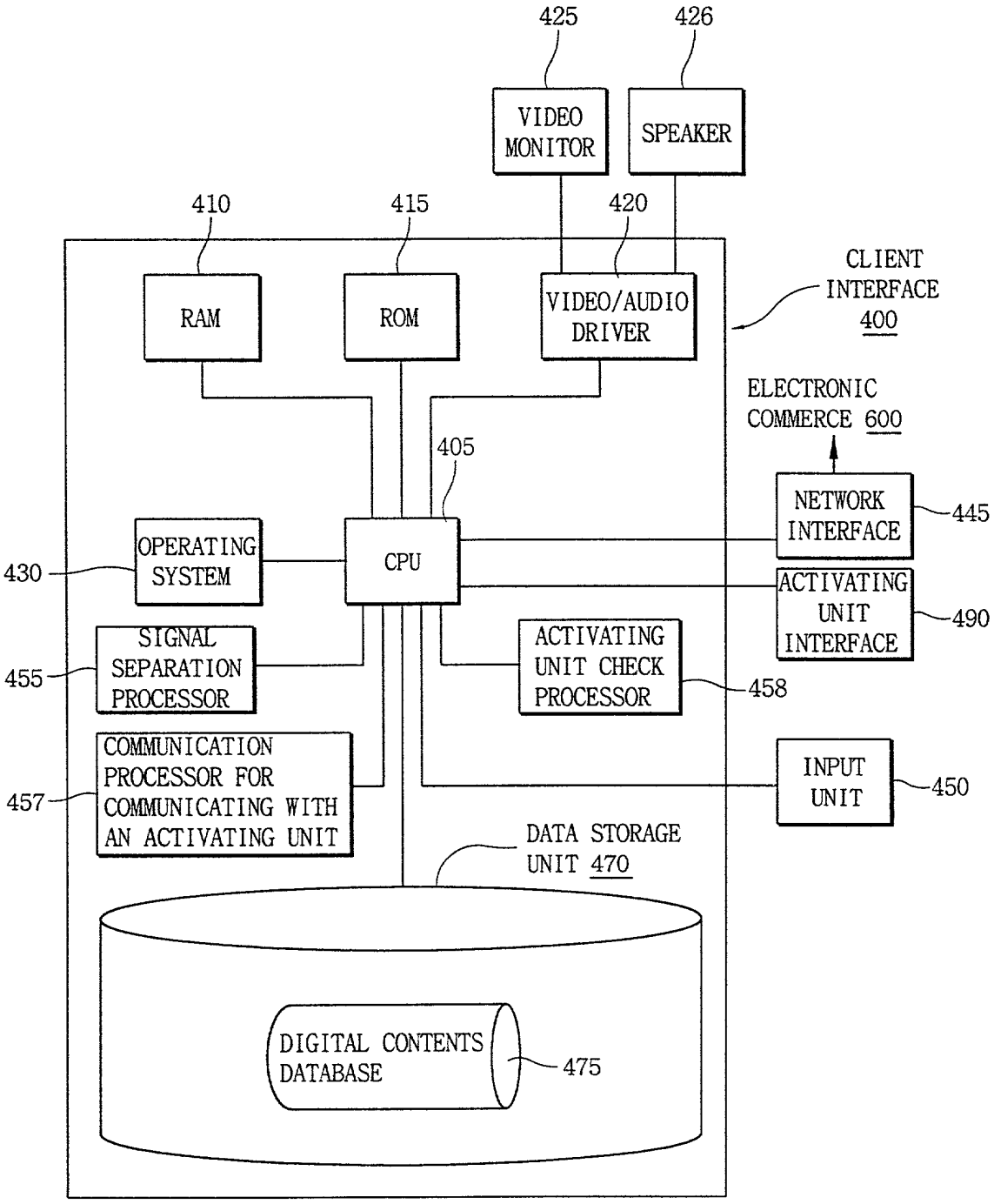

425
426
VIDEO MONITOR
SPEAKER
410
415
420
RAM
ROM
VIDEO/AUDIO DRIVER
CLIENT INTERFACE 400
ELECTRONIC COMMERCE 600
405
NETWORK INTERFACE
445
OPERATING SYSTEM
430
CPU
ACTIVATING UNIT INTERFACE
490
SIGNAL SEPARATION PROCESSOR
455
ACTIVATING UNIT CHECK PROCESSOR
458
COMMUNICATION PROCESSOR FOR COMMUNICATING WITH AN ACTIVATING UNIT
457
INPUT UNIT
450
DATA STORAGE UNIT 470
DIGITAL CONTENTS DATABASE
475

FIG.7

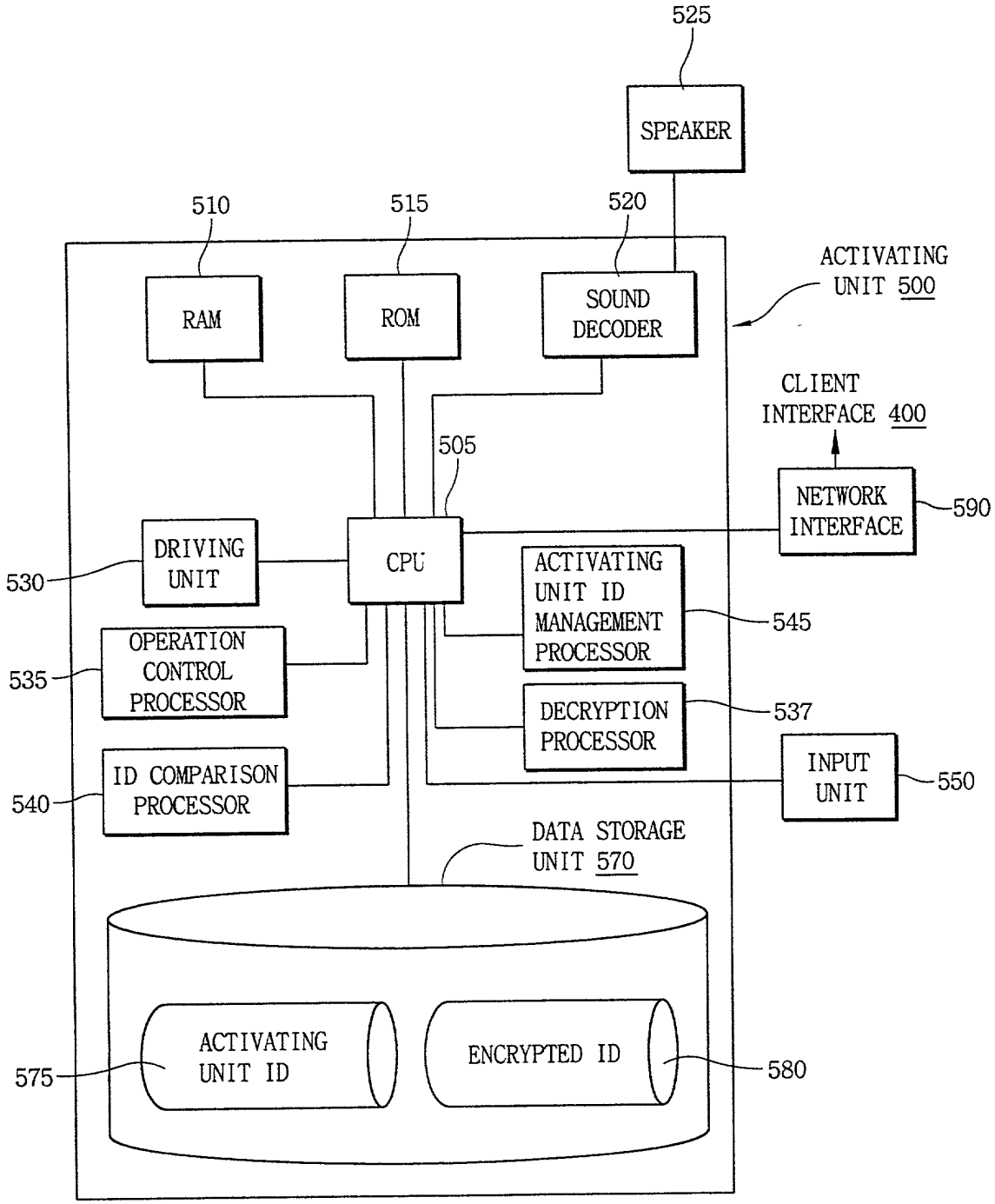

525
SPEAKER
510
515
520
RAM
ROM
SOUND DECODER
ACTIVATING UNIT 500
CLIENT INTERFACE 400
505
NETWORK INTERFACE
590
DRIVING UNIT
530
CPU
ACTIVATING UNIT ID MANAGEMENT PROCESSOR
545
OPERATION CONTROL PROCESSOR
535
DECRYPTION PROCESSOR
537
INPUT UNIT
550
ID COMPARISON PROCESSOR
540
DATA STORAGE UNIT 570
ACTIVATING UNIT ID
575
ENCRYPTED ID
580

FIG.8

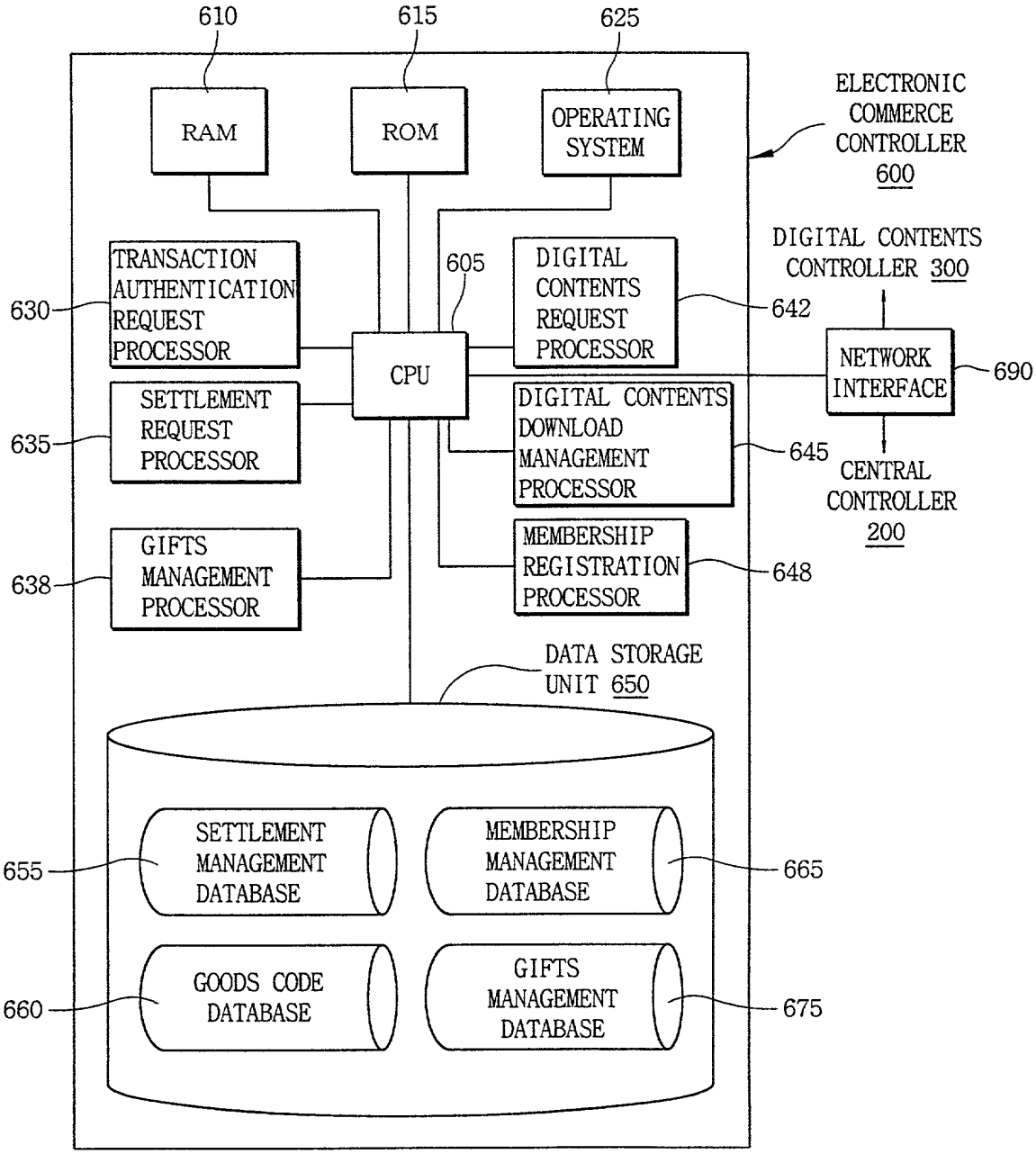

610
615
625
RAM
ROM
OPERATING SYSTEM
ELECTRONIC COMMERCE CONTROLLER 600
DIGITAL CONTENTS CONTROLLER 300
TRANSACTION AUTHENTICATION REQUEST PROCESSOR
630
605
DIGITAL CONTENTS REQUEST PROCESSOR
642
CPU
NETWORK INTERFACE
690
SETTLEMENT REQUEST PROCESSOR
635
DIGITAL CONTENTS DOWNLOAD MANAGEMENT PROCESSOR
645
CENTRAL CONTROLLER 200
GIFTS MANAGEMENT PROCESSOR
638
MEMBERSHIP REGISTRATION PROCESSOR
648
DATA STORAGE UNIT 650
SETTLEMENT MANAGEMENT DATABASE
655
MEMBERSHIP MANAGEMENT DATABASE
665
GOODS CODE DATABASE
660
GIFTS MANAGEMENT DATABASE
675

FIG.9

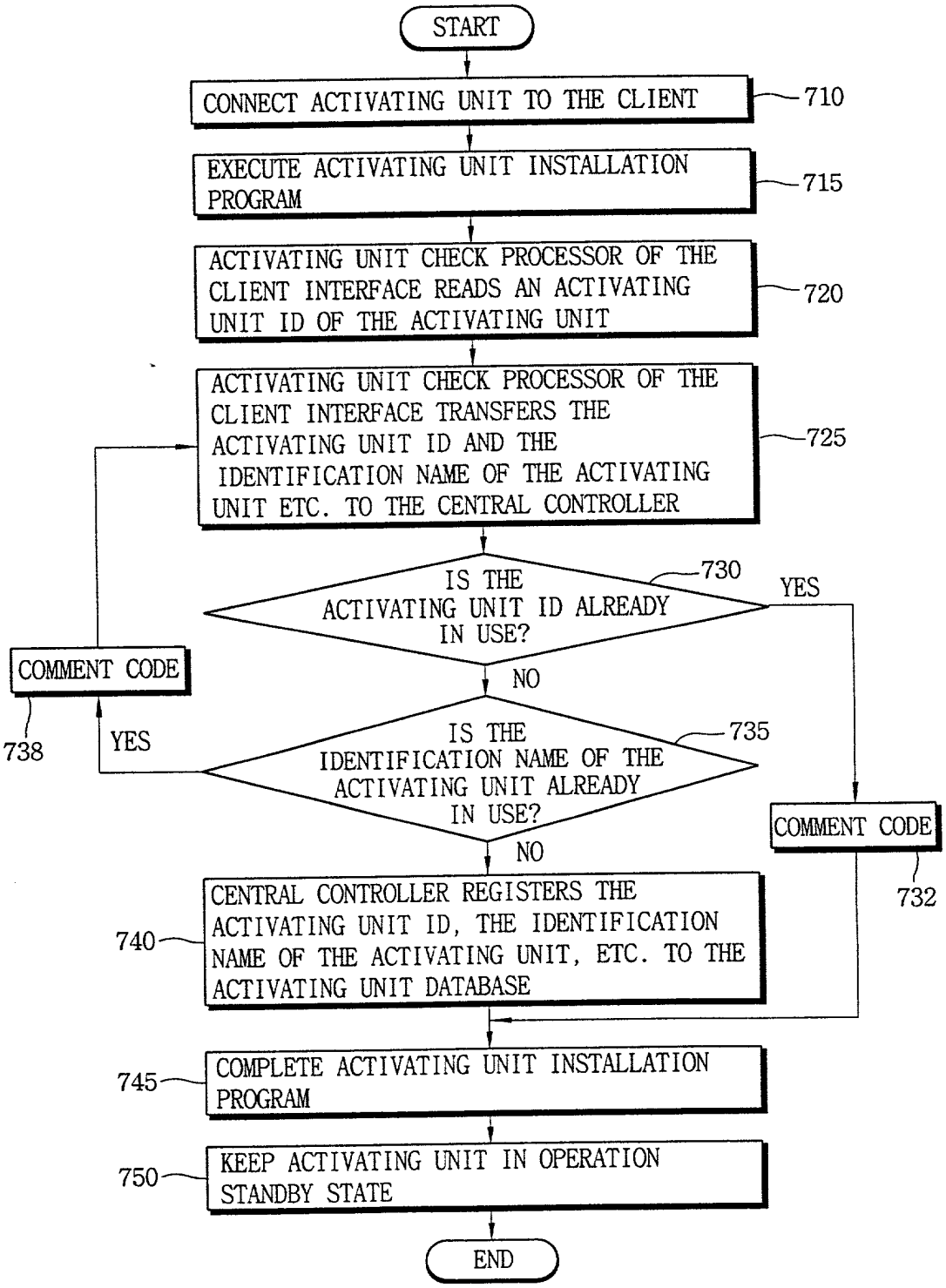

START
CONNECT ACTIVATING UNIT TO THE CLIENT
710
EXECUTE ACTIVATING UNIT INSTALLATION PROGRAM
715
ACTIVATING UNIT CHECK PROCESSOR OF THE CLIENT INTERFACE READS AN ACTIVATING UNIT ID OF THE ACTIVATING UNIT
720
ACTIVATING UNIT CHECK PROCESSOR OF THE CLIENT INTERFACE TRANSFERS THE ACTIVATING UNIT ID AND THE IDENTIFICATION NAME OF THE ACTIVATING UNIT ETC. TO THE CENTRAL CONTROLLER
725
IS THE ACTIVATING UNIT ID ALREADY IN USE?
730
YES
NO
COMMENT CODE
738
YES
IS THE IDENTIFICATION NAME OF THE ACTIVATING UNIT ALREADY IN USE?
735
COMMENT CODE
732
NO
CENTRAL CONTROLLER REGISTERS THE ACTIVATING UNIT ID, THE IDENTIFICATION NAME OF THE ACTIVATING UNIT, ETC. TO THE ACTIVATING UNIT DATABASE
740
COMPLETE ACTIVATING UNIT INSTALLATION PROGRAM
745
KEEP ACTIVATING UNIT IN OPERATION STANDBY STATE
750
END

FIG. 10

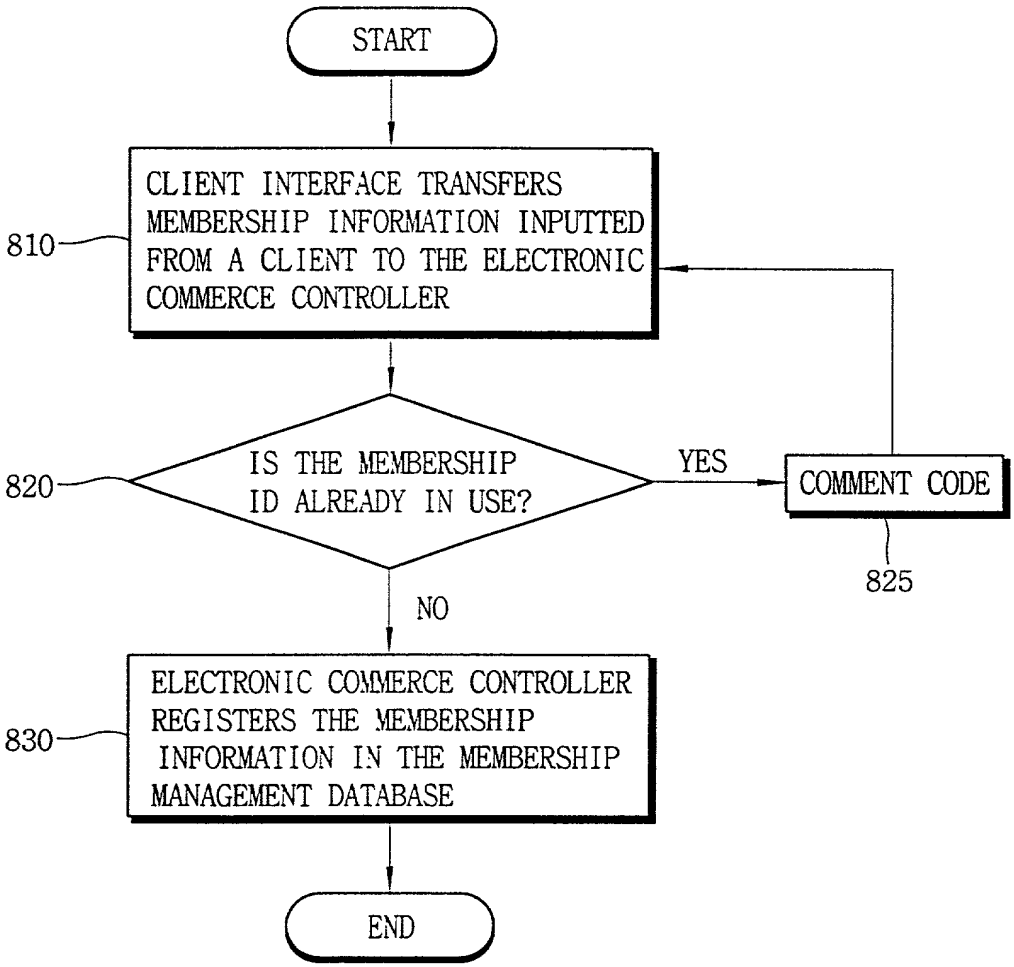

START
CLIENT INTERFACE TRANSFERS MEMBERSHIP INFORMATION INPUTTED FROM A CLIENT TO THE ELECTRONIC COMMERCE CONTROLLER
810
IS THE MEMBERSHIP ID ALREADY IN USE?
820
YES
COMMENT CODE
825
NO
ELECTRONIC COMMERCE CONTROLLER REGISTERS THE MEMBERSHIP INFORMATION IN THE MEMBERSHIP MANAGEMENT DATABASE
830
END

FIG. 11A

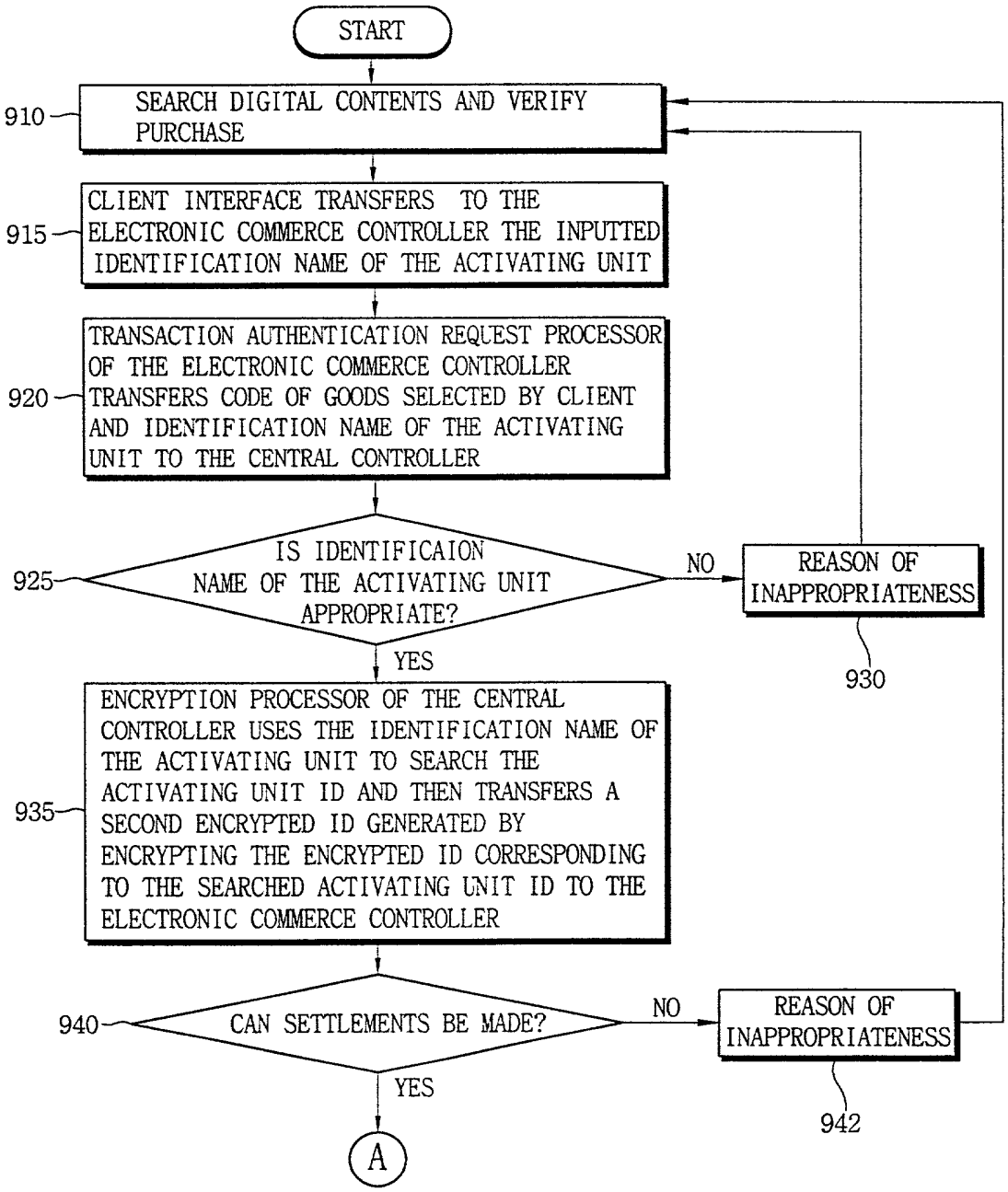

START
910
SEARCH DIGITAL CONTENTS AND VERIFY PURCHASE
915
CLIENT INTERFACE TRANSFERS TO THE ELECTRONIC COMMERCE CONTROLLER THE INPUTTED IDENTIFICATION NAME OF THE ACTIVATING UNIT
920
TRANSACTION AUTHENTICATION REQUEST PROCESSOR OF THE ELECTRONIC COMMERCE CONTROLLER TRANSFERS CODE OF GOODS SELECTED BY CLIENT AND IDENTIFICATION NAME OF THE ACTIVATING UNIT TO THE CENTRAL CONTROLLER
925
IS IDENTIFICAION NAME OF THE ACTIVATING UNIT APPROPRIATE?
NO
REASON OF INAPPROPRIATENESS
930
YES
935
ENCRYPTION PROCESSOR OF THE CENTRAL CONTROLLER USES THE IDENTIFICATION NAME OF THE ACTIVATING UNIT TO SEARCH THE ACTIVATING UNIT ID AND THEN TRANSFERS A SECOND ENCRYPTED ID GENERATED BY ENCRYPTING THE ENCRYPTED ID CORRESPONDING TO THE SEARCHED ACTIVATING UNIT ID TO THE ELECTRONIC COMMERCE CONTROLLER
940
CAN SETTLEMENTS BE MADE?
NO
REASON OF INAPPROPRIATENESS
942
YES
A

FIG. 11B

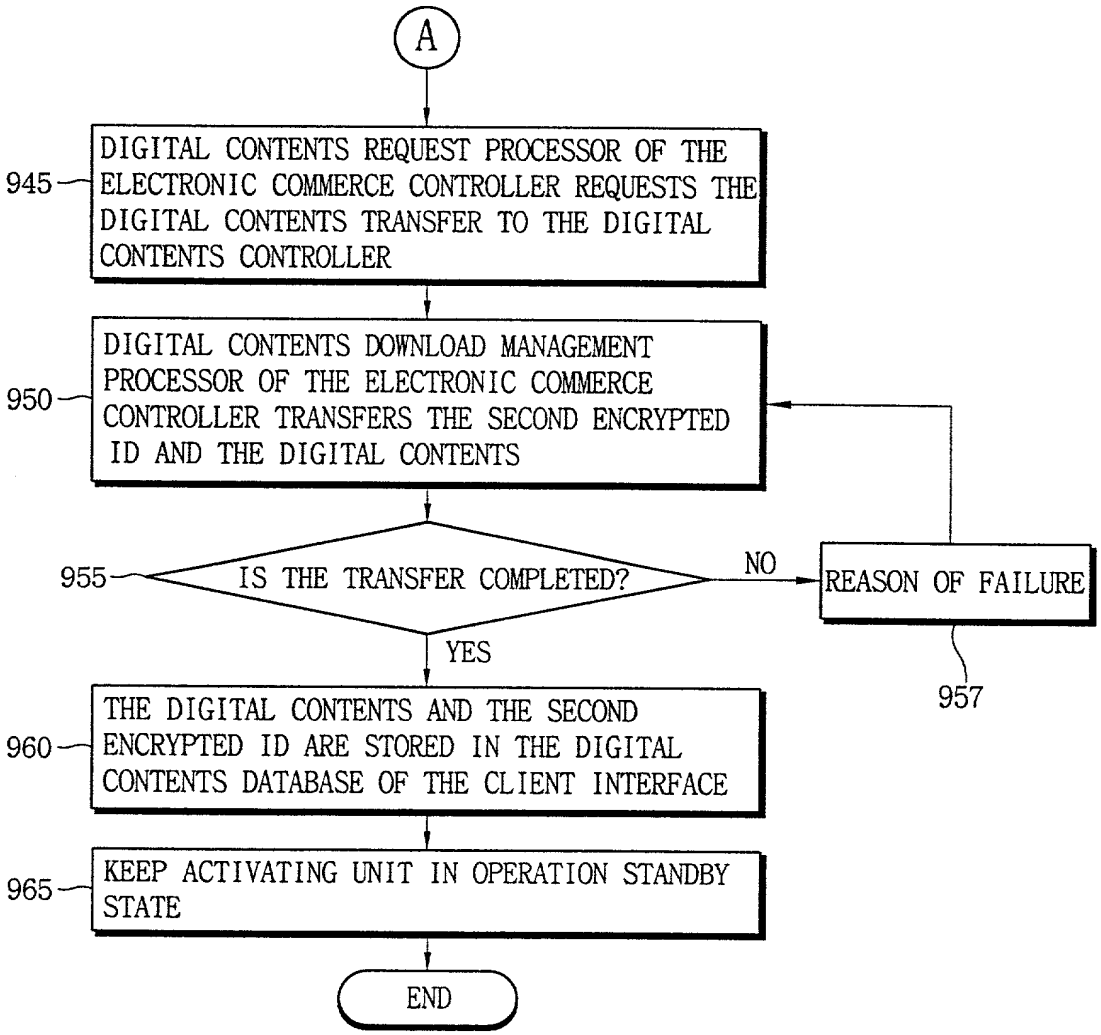

A
DIGITAL CONTENTS REQUEST PROCESSOR OF THE ELECTRONIC COMMERCE CONTROLLER REQUESTS THE DIGITAL CONTENTS TRANSFER TO THE DIGITAL CONTENTS CONTROLLER
945
DIGITAL CONTENTS DOWNLOAD MANAGEMENT PROCESSOR OF THE ELECTRONIC COMMERCE CONTROLLER TRANSFERS THE SECOND ENCRYPTED ID AND THE DIGITAL CONTENTS
950
IS THE TRANSFER COMPLETED?
955
NO
REASON OF FAILURE
957
YES
THE DIGITAL CONTENTS AND THE SECOND ENCRYPTED ID ARE STORED IN THE DIGITAL CONTENTS DATABASE OF THE CLIENT INTERFACE
960
KEEP ACTIVATING UNIT IN OPERATION STANDBY STATE
965
END

FIG. 12A-1

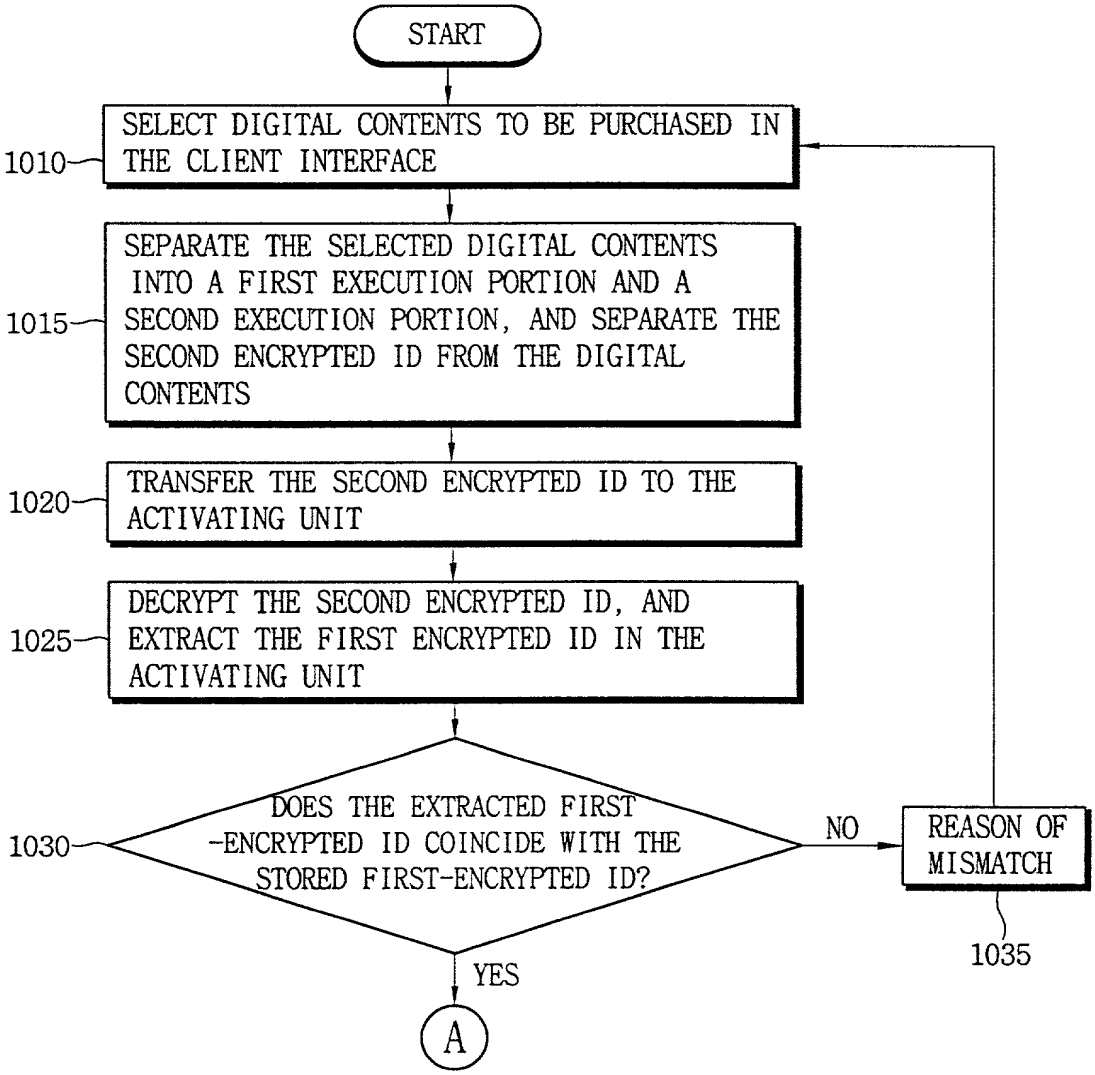

START
SELECT DIGITAL CONTENTS TO BE PURCHASED IN THE CLIENT INTERFACE
1010
SEPARATE THE SELECTED DIGITAL CONTENTS INTO A FIRST EXECUTION PORTION AND A SECOND EXECUTION PORTION, AND SEPARATE THE SECOND ENCRYPTED ID FROM THE DIGITAL CONTENTS
1015
TRANSFER THE SECOND ENCRYPTED ID TO THE ACTIVATING UNIT
1020
DECRYPT THE SECOND ENCRYPTED ID, AND EXTRACT THE FIRST ENCRYPTED ID IN THE ACTIVATING UNIT
1025
DOES THE EXTRACTED FIRST -ENCRYPTED ID COINCIDE WITH THE STORED FIRST-ENCRYPTED ID?
1030
NO
REASON OF MISMATCH
1035
YES
A

FIG. 12A-2

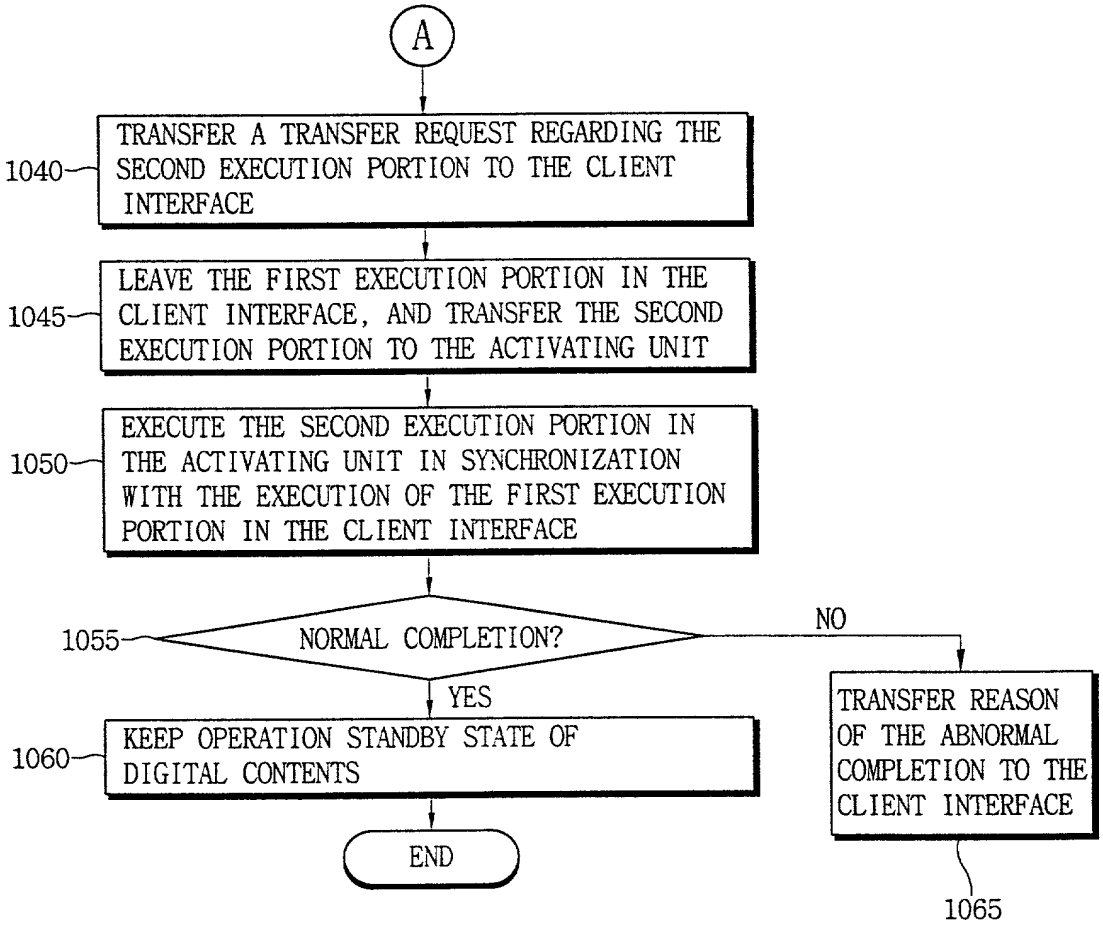

A
1040
TRANSFER A TRANSFER REQUEST REGARDING THE SECOND EXECUTION PORTION TO THE CLIENT INTERFACE
1045
LEAVE THE FIRST EXECUTION PORTION IN THE CLIENT INTERFACE, AND TRANSFER THE SECOND EXECUTION PORTION TO THE ACTIVATING UNIT
1050
EXECUTE THE SECOND EXECUTION PORTION IN THE ACTIVATING UNIT IN SYNCHRONIZATION WITH THE EXECUTION OF THE FIRST EXECUTION PORTION IN THE CLIENT INTERFACE
1055
NORMAL COMPLETION?
NO
YES
1060
KEEP OPERATION STANDBY STATE OF DIGITAL CONTENTS
END
TRANSFER REASON OF THE ABNORMAL COMPLETION TO THE CLIENT INTERFACE
1065

FIG. 12B-1

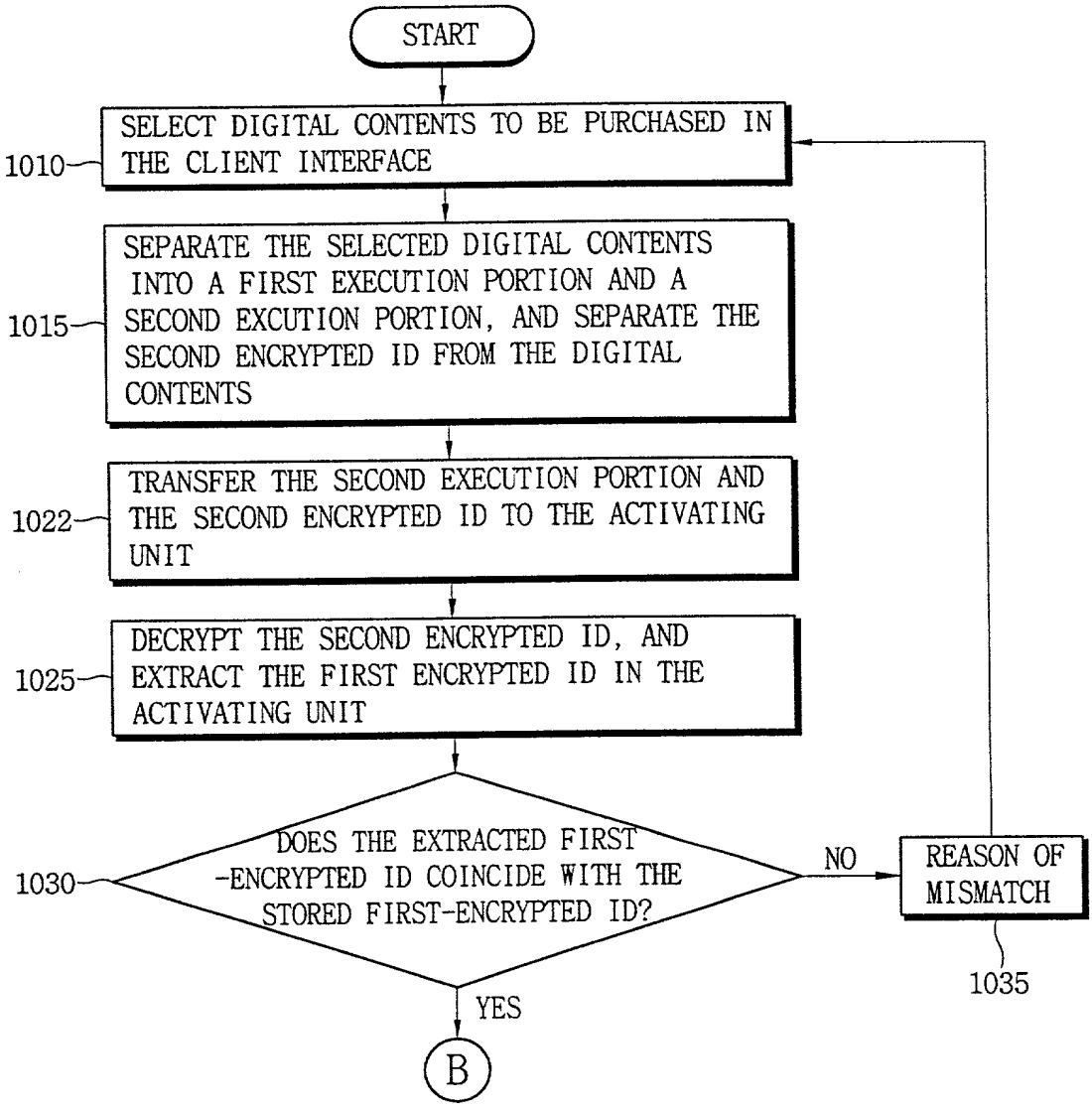

START
SELECT DIGITAL CONTENTS TO BE PURCHASED IN THE CLIENT INTERFACE
1010
SEPARATE THE SELECTED DIGITAL CONTENTS INTO A FIRST EXECUTION PORTION AND A SECOND EXCUTION PORTION, AND SEPARATE THE SECOND ENCRYPTED ID FROM THE DIGITAL CONTENTS
1015
TRANSFER THE SECOND EXECUTION PORTION AND THE SECOND ENCRYPTED ID TO THE ACTIVATING UNIT
1022
DECRYPT THE SECOND ENCRYPTED ID, AND EXTRACT THE FIRST ENCRYPTED ID IN THE ACTIVATING UNIT
1025
DOES THE EXTRACTED FIRST -ENCRYPTED ID COINCIDE WITH THE STORED FIRST-ENCRYPTED ID?
1030
NO
REASON OF MISMATCH
1035
YES
B

FIG. 12B-2

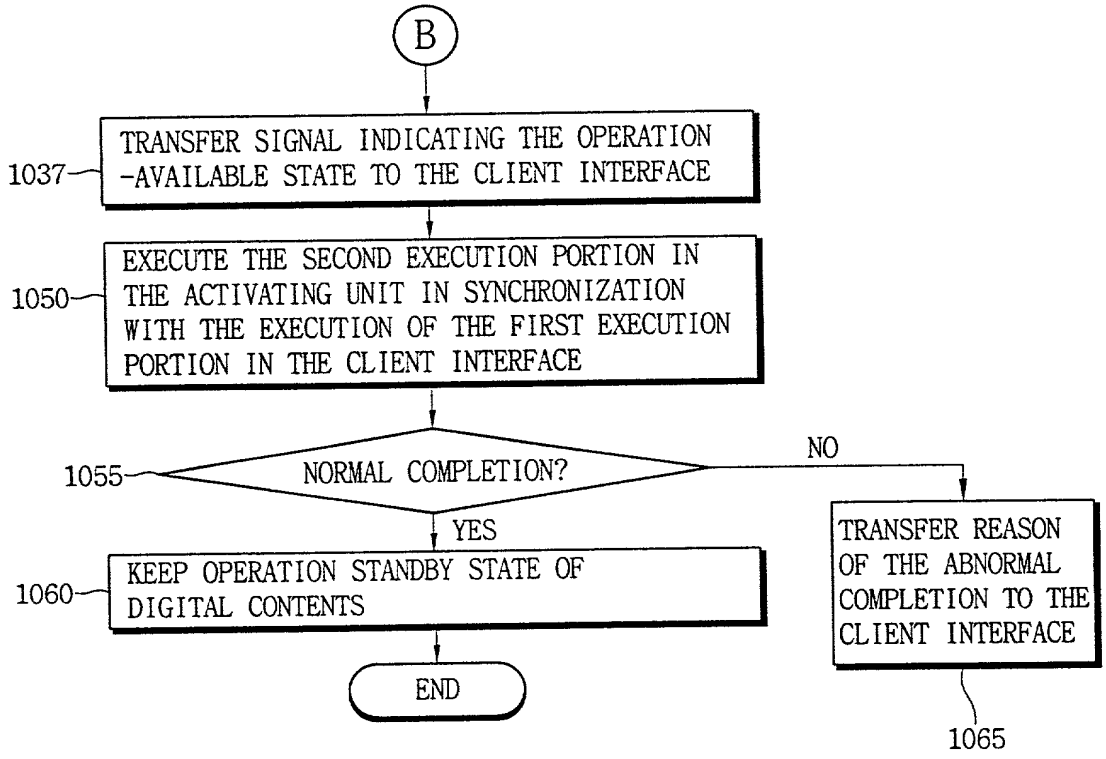

B
TRANSFER SIGNAL INDICATING THE OPERATION -AVAILABLE STATE TO THE CLIENT INTERFACE
1037
EXECUTE THE SECOND EXECUTION PORTION IN THE ACTIVATING UNIT IN SYNCHRONIZATION WITH THE EXECUTION OF THE FIRST EXECUTION PORTION IN THE CLIENT INTERFACE
1050
NORMAL COMPLETION?
1055
NO
YES
KEEP OPERATION STANDBY STATE OF DIGITAL CONTENTS
1060
END
TRANSFER REASON OF THE ABNORMAL COMPLETION TO THE CLIENT INTERFACE
1065

FIG. 12C-1

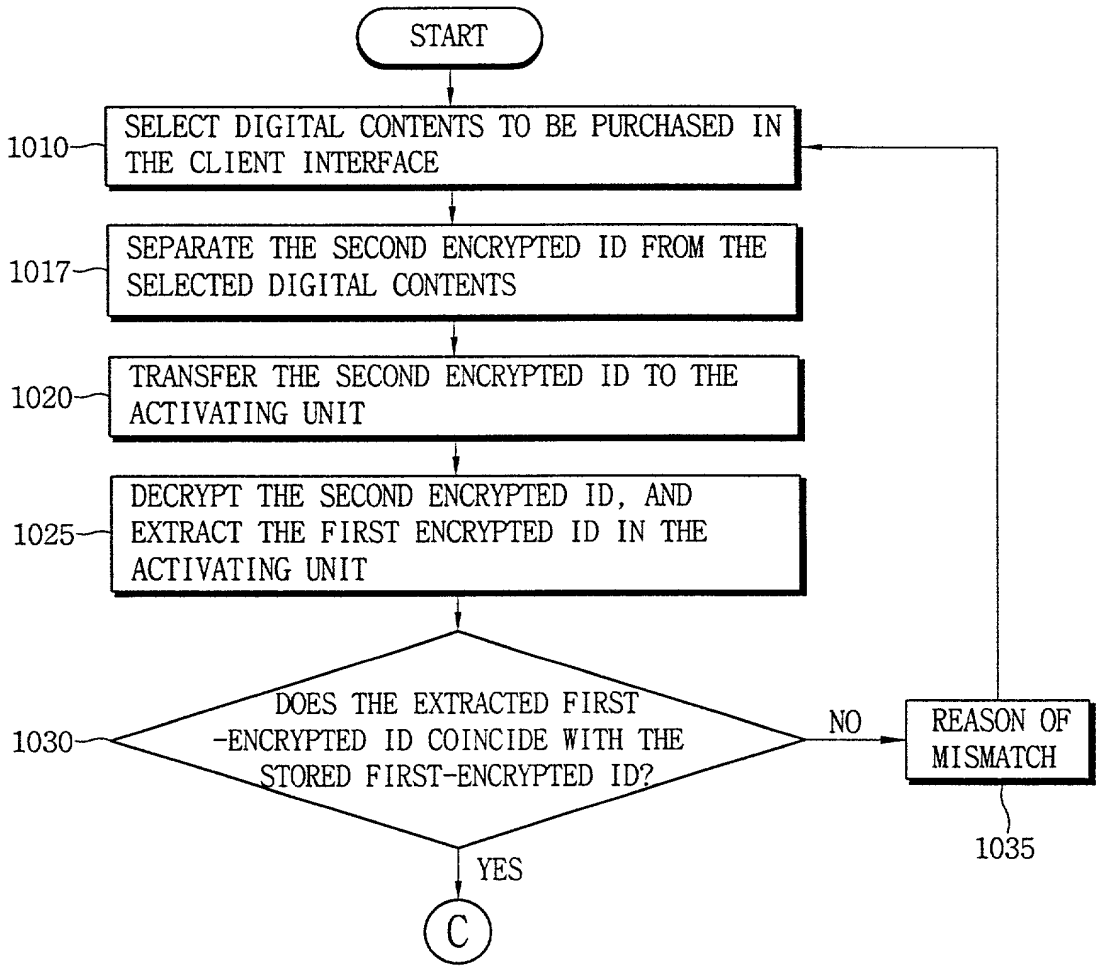


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FIG. 12C-2

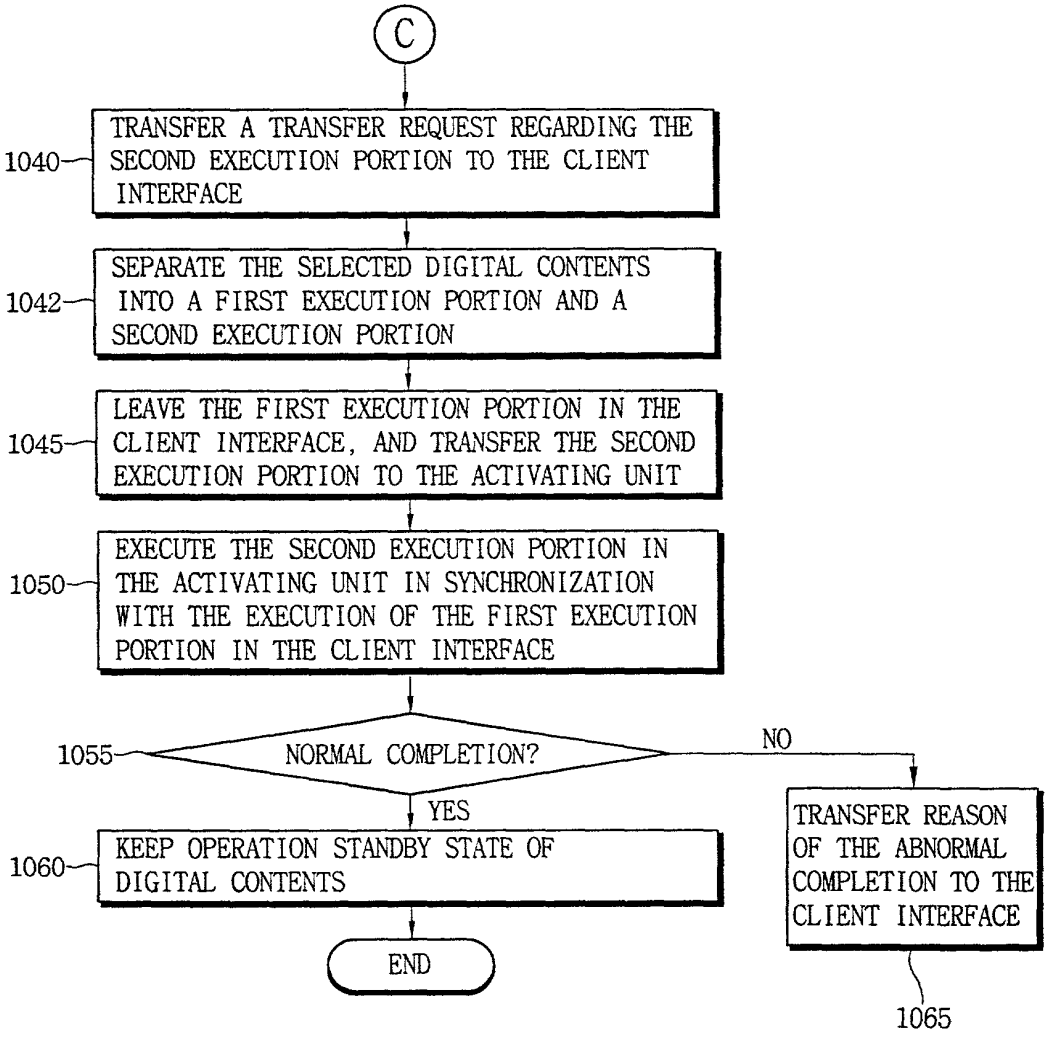
C
TRANSFER A TRANSFER REQUEST REGARDING THE SECOND EXECUTION PORTION TO THE CLIENT INTERFACE
1040
SEPARATE THE SELECTED DIGITAL CONTENTS INTO A FIRST EXECUTION PORTION AND A SECOND EXECUTION PORTION
1042
LEAVE THE FIRST EXECUTION PORTION IN THE CLIENT INTERFACE, AND TRANSFER THE SECOND EXECUTION PORTION TO THE ACTIVATING UNIT
1045
EXECUTE THE SECOND EXECUTION PORTION IN THE ACTIVATING UNIT IN SYNCHRONIZATION WITH THE EXECUTION OF THE FIRST EXECUTION PORTION IN THE CLIENT INTERFACE
1050
NORMAL COMPLETION?
1055
NO
YES
KEEP OPERATION STANDBY STATE OF DIGITAL CONTENTS
1060
END
TRANSFER REASON OF THE ABNORMAL COMPLETION TO THE CLIENT INTERFACE
1065

FIG. 13

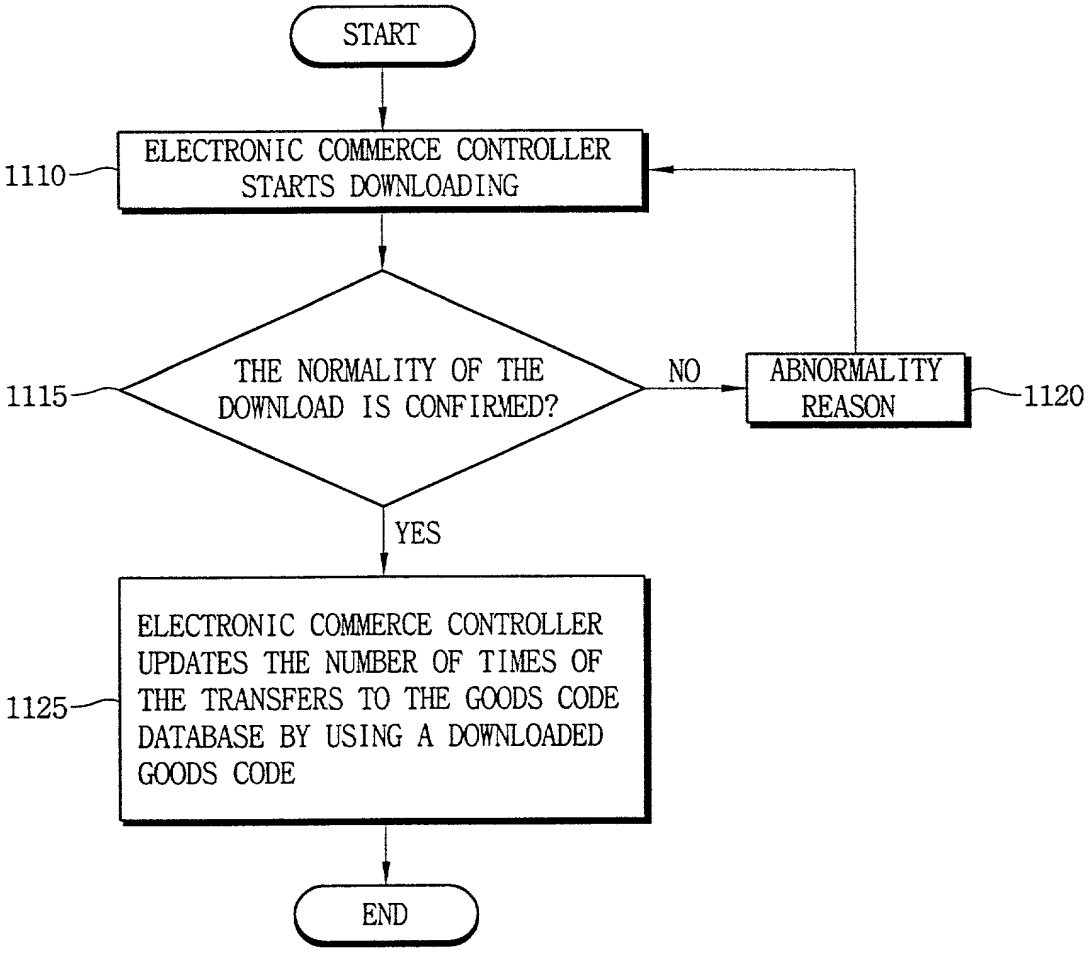
START
ELECTRONIC COMMERCE CONTROLLER STARTS DOWNLOADING
1110
THE NORMALITY OF THE DOWNLOAD IS CONFIRMED?
1115
NO
ABNORMALITY REASON
1120
YES
ELECTRONIC COMMERCE CONTROLLER UPDATES THE NUMBER OF TIMES OF THE TRANSFERS TO THE GOODS CODE DATABASE BY USING A DOWNLOADED GOODS CODE
1125
END

FIG. 14

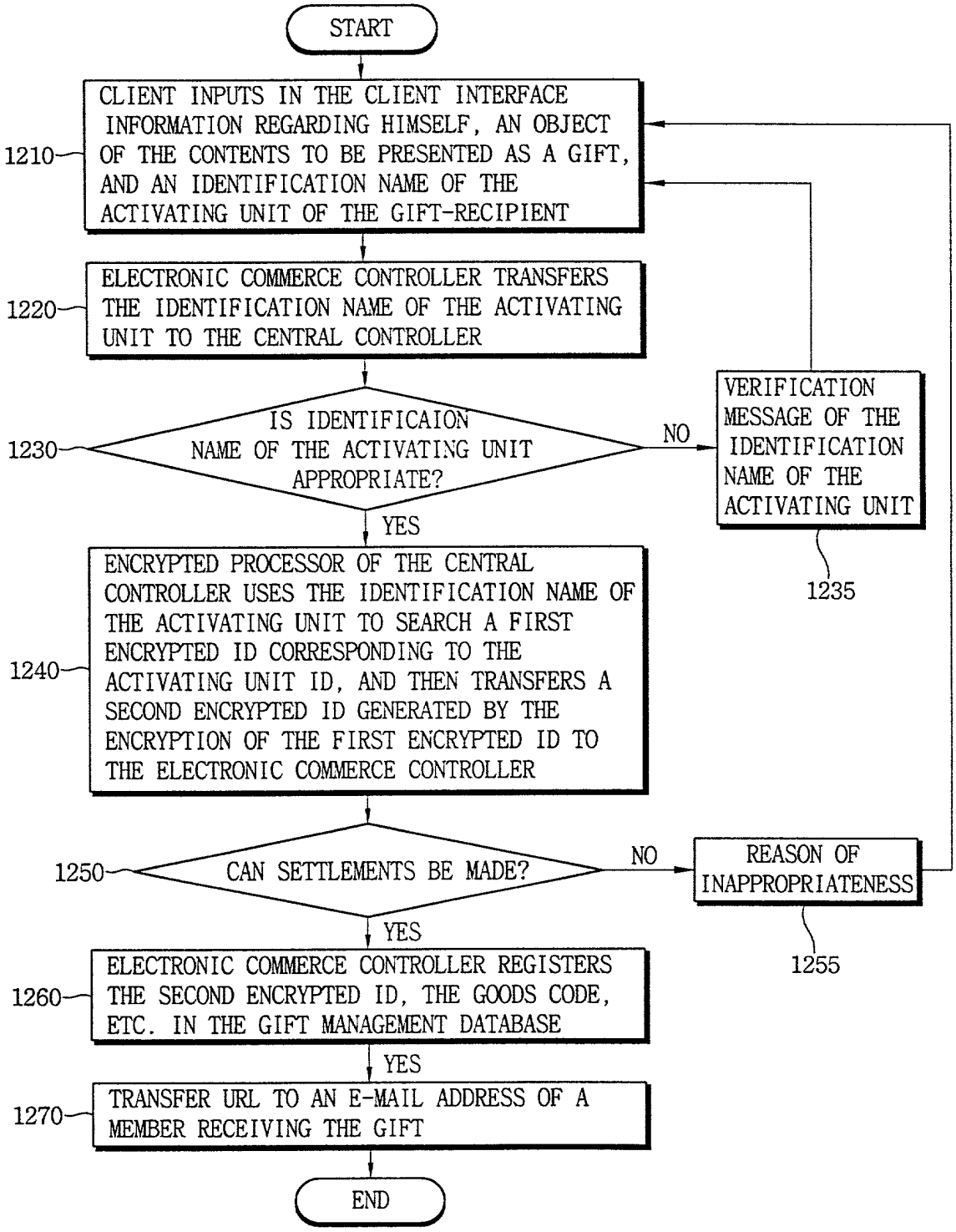
START
CLIENT INPUTS IN THE CLIENT INTERFACE INFORMATION REGARDING HIMSELF, AN OBJECT OF THE CONTENTS TO BE PRESENTED AS A GIFT, AND AN IDENTIFICATION NAME OF THE ACTIVATING UNIT OF THE GIFT-RECIPIENT
1210
ELECTRONIC COMMERCE CONTROLLER TRANSFERS THE IDENTIFICATION NAME OF THE ACTIVATING UNIT TO THE CENTRAL CONTROLLER
1220
IS IDENTIFICAION NAME OF THE ACTIVATING UNIT APPROPRIATE?
1230
NO
VERIFICATION MESSAGE OF THE IDENTIFICATION NAME OF THE ACTIVATING UNIT
1235
YES
ENCRYPTED PROCESSOR OF THE CENTRAL CONTROLLER USES THE IDENTIFICATION NAME OF THE ACTIVATING UNIT TO SEARCH A FIRST ENCRYPTED ID CORRESPONDING TO THE ACTIVATING UNIT ID, AND THEN TRANSFERS A SECOND ENCRYPTED ID GENERATED BY THE ENCRYPTION OF THE FIRST ENCRYPTED ID TO THE ELECTRONIC COMMERCE CONTROLLER
1240
CAN SETTLEMENTS BE MADE?
1250
NO
REASON OF INAPPROPRIATENESS
1255
YES
ELECTRONIC COMMERCE CONTROLLER REGISTERS THE SECOND ENCRYPTED ID, THE GOODS CODE, ETC. IN THE GIFT MANAGEMENT DATABASE
1260
YES
TRANSFER URL TO AN E-MAIL ADDRESS OF A MEMBER RECEIVING THE GIFT
1270
END

FIG. 15

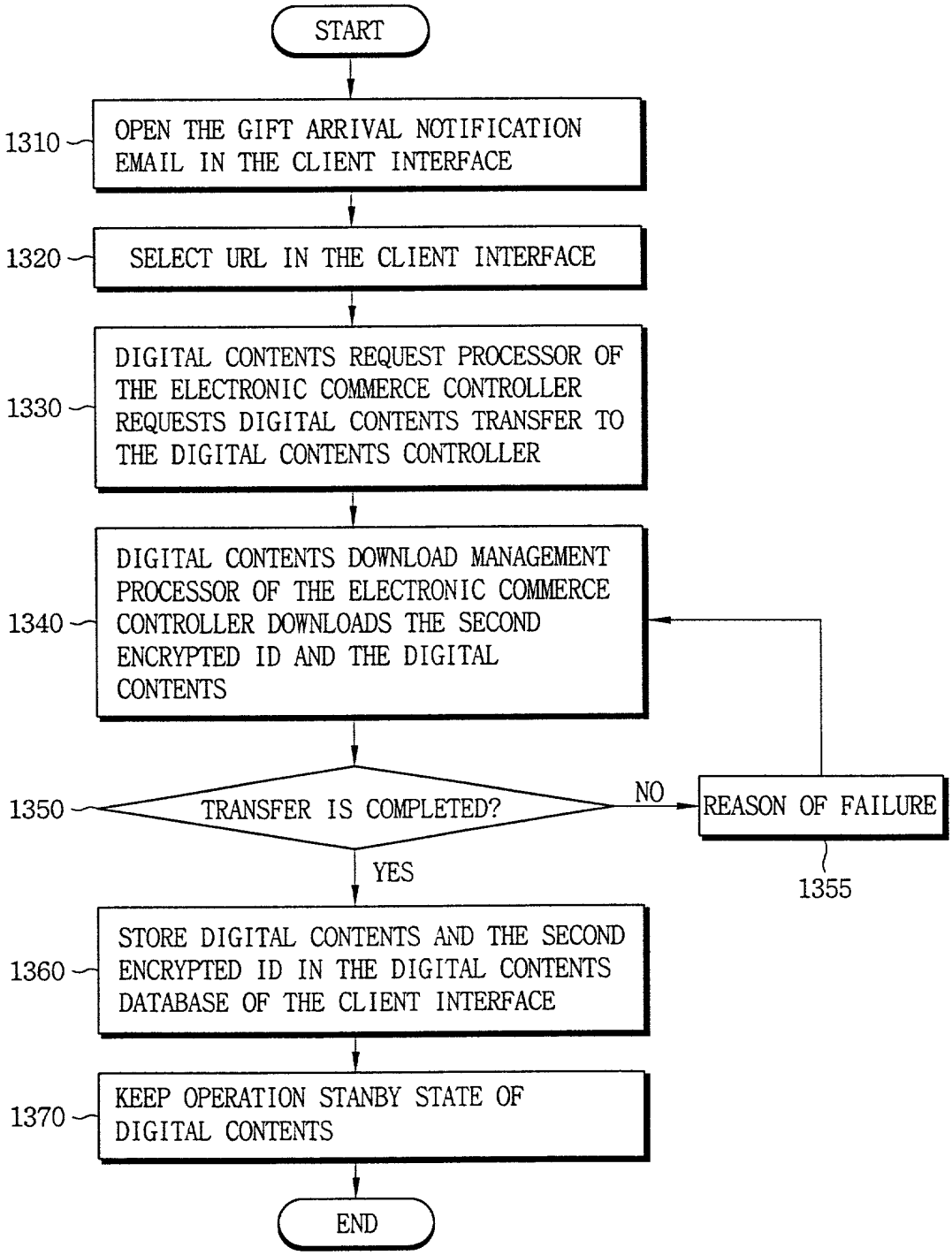

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FIG. 16

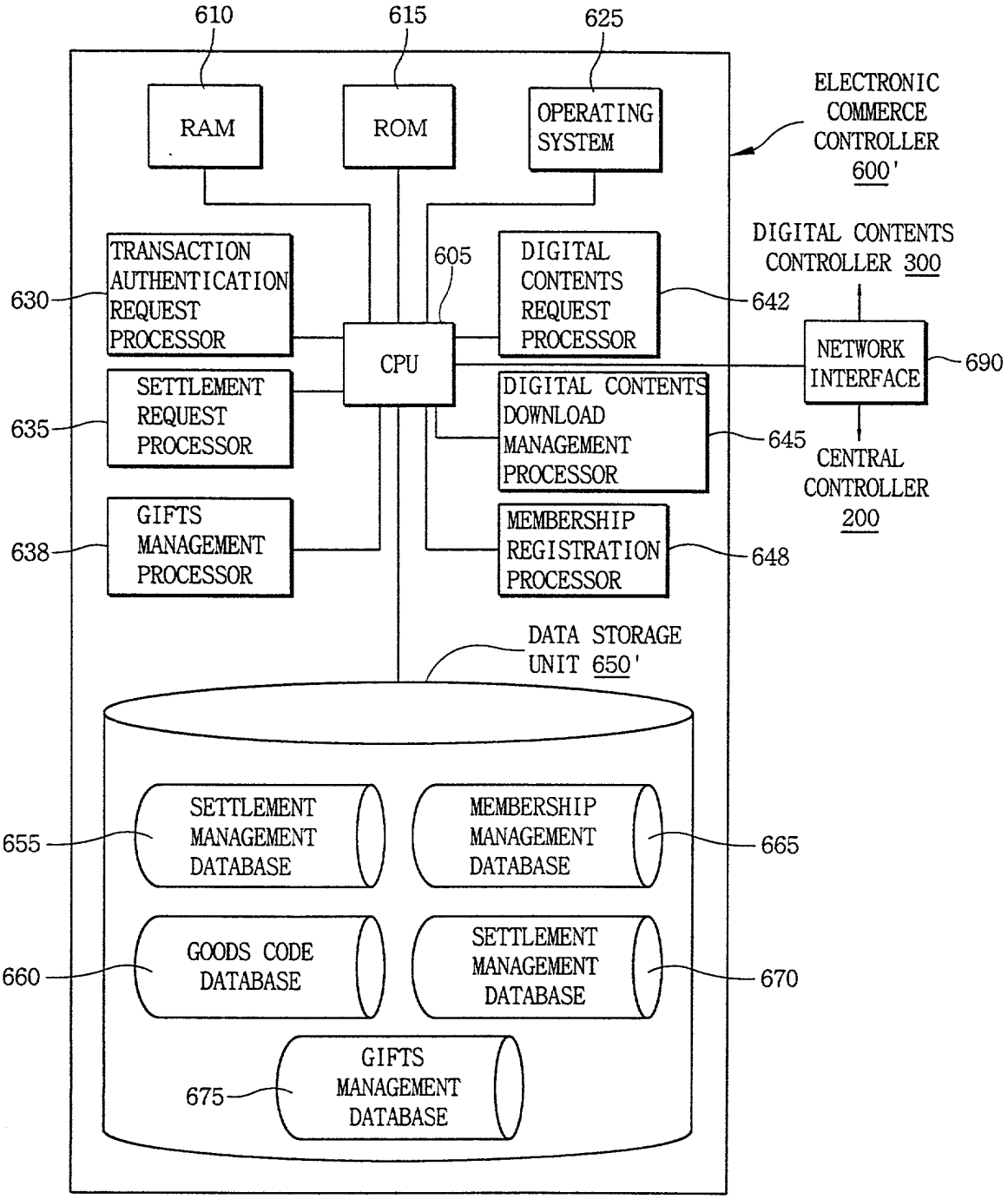
610
615
625
RAM
ROM
OPERATING SYSTEM
ELECTRONIC COMMERCE CONTROLLER 600'
DIGITAL CONTENTS CONTROLLER 300
TRANSACTION AUTHENTICATION REQUEST PROCESSOR
630
605
DIGITAL CONTENTS REQUEST PROCESSOR
642
CPU
NETWORK INTERFACE
690
SETTLEMENT REQUEST PROCESSOR
635
DIGITAL CONTENTS DOWNLOAD MANAGEMENT PROCESSOR
645
CENTRAL CONTROLLER 200
GIFTS MANAGEMENT PROCESSOR
638
MEMBERSHIP REGISTRATION PROCESSOR
648
DATA STORAGE UNIT 650'
SETTLEMENT MANAGEMENT DATABASE
655
MEMBERSHIP MANAGEMENT DATABASE
665
GOODS CODE DATABASE
660
SETTLEMENT MANAGEMENT DATABASE
670
GIFTS MANAGEMENT DATABASE
675

FIG. 17

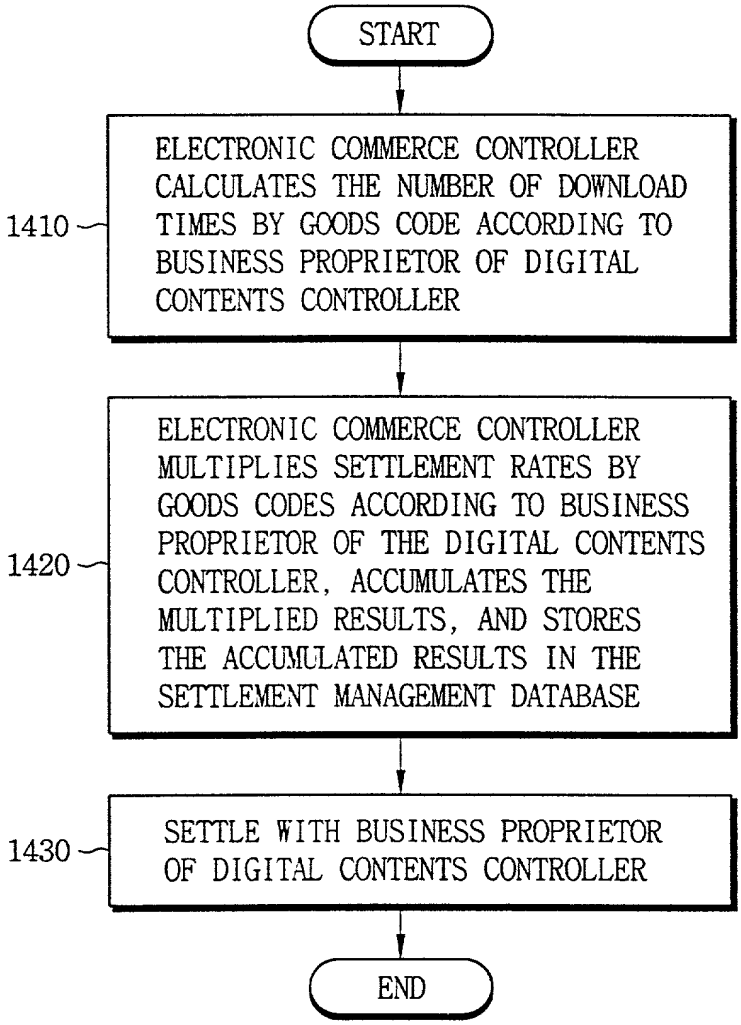

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FIG. 18

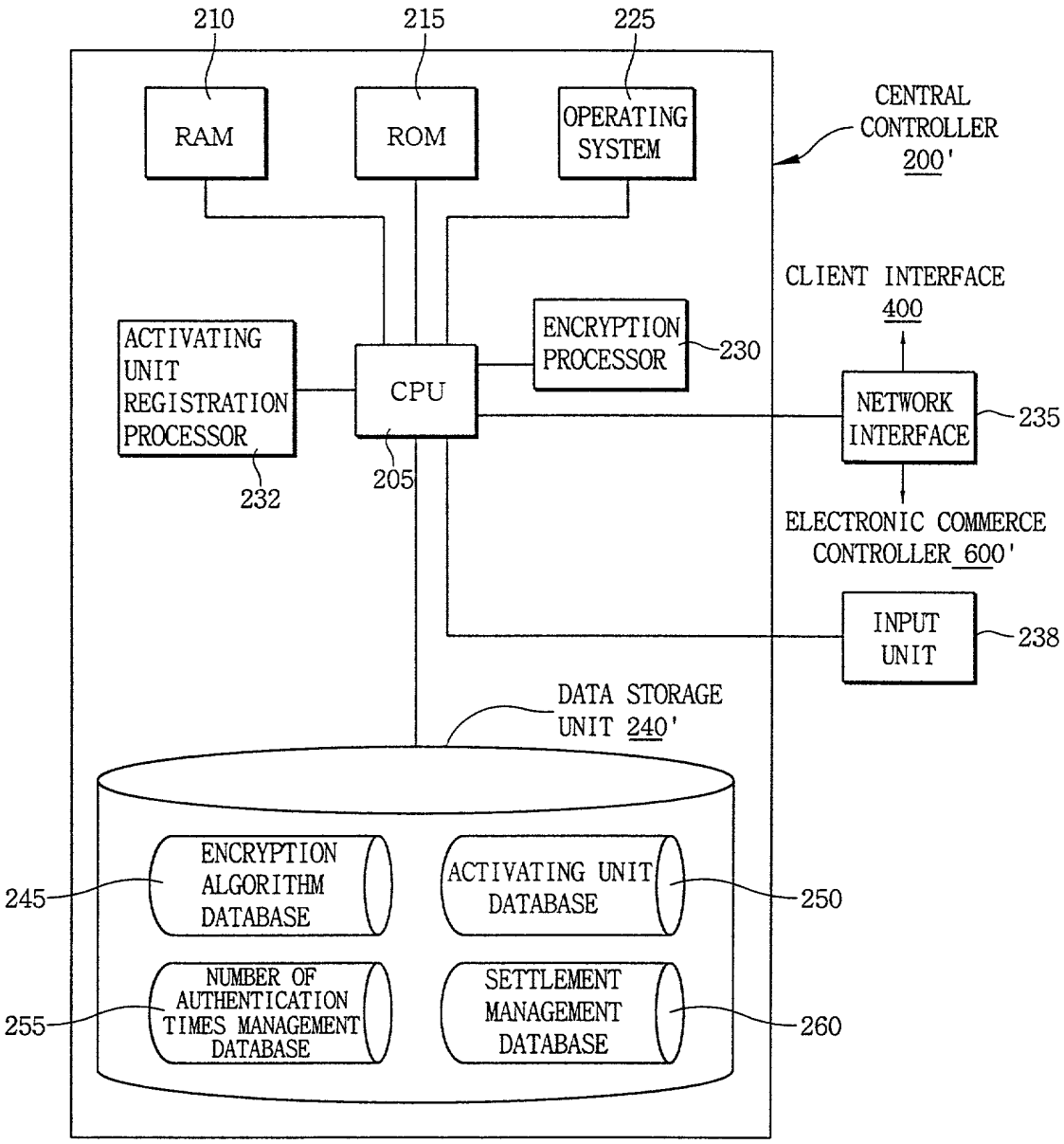
210
215
225
RAM
ROM
OPERATING SYSTEM
CENTRAL CONTROLLER 200'
CLIENT INTERFACE 400
ACTIVATING UNIT REGISTRATION PROCESSOR
232
CPU
205
ENCRYPTION PROCESSOR
230
NETWORK INTERFACE
235
ELECTRONIC COMMERCE CONTROLLER 600'
INPUT UNIT
238
DATA STORAGE UNIT 240'
ENCRYPTION ALGORITHM DATABASE
245
ACTIVATING UNIT DATABASE
250
NUMBER OF AUTHENTICATION TIMES MANAGEMENT DATABASE
255
SETTLEMENT MANAGEMENT DATABASE
260

FIG. 19A

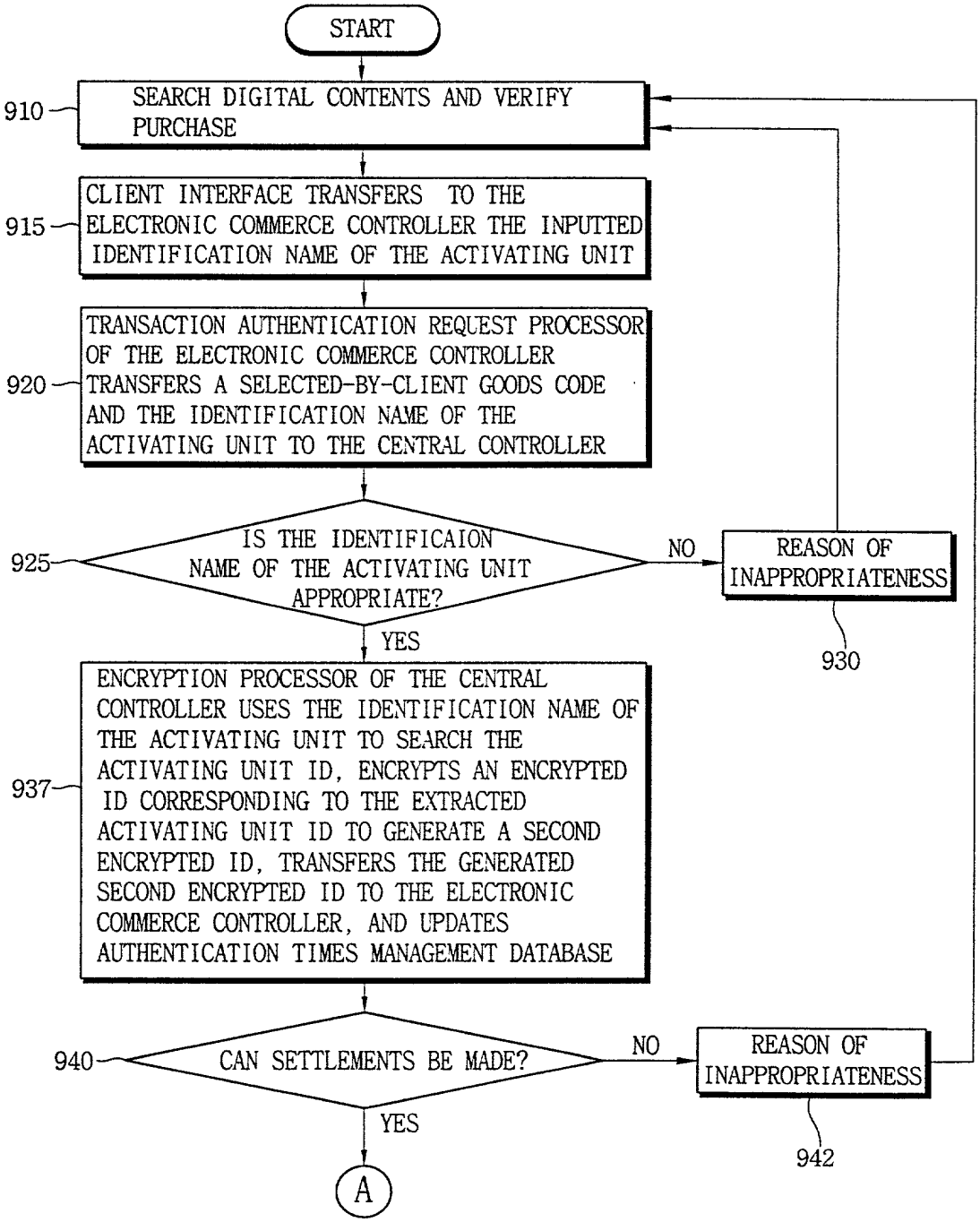

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FIG. 19B

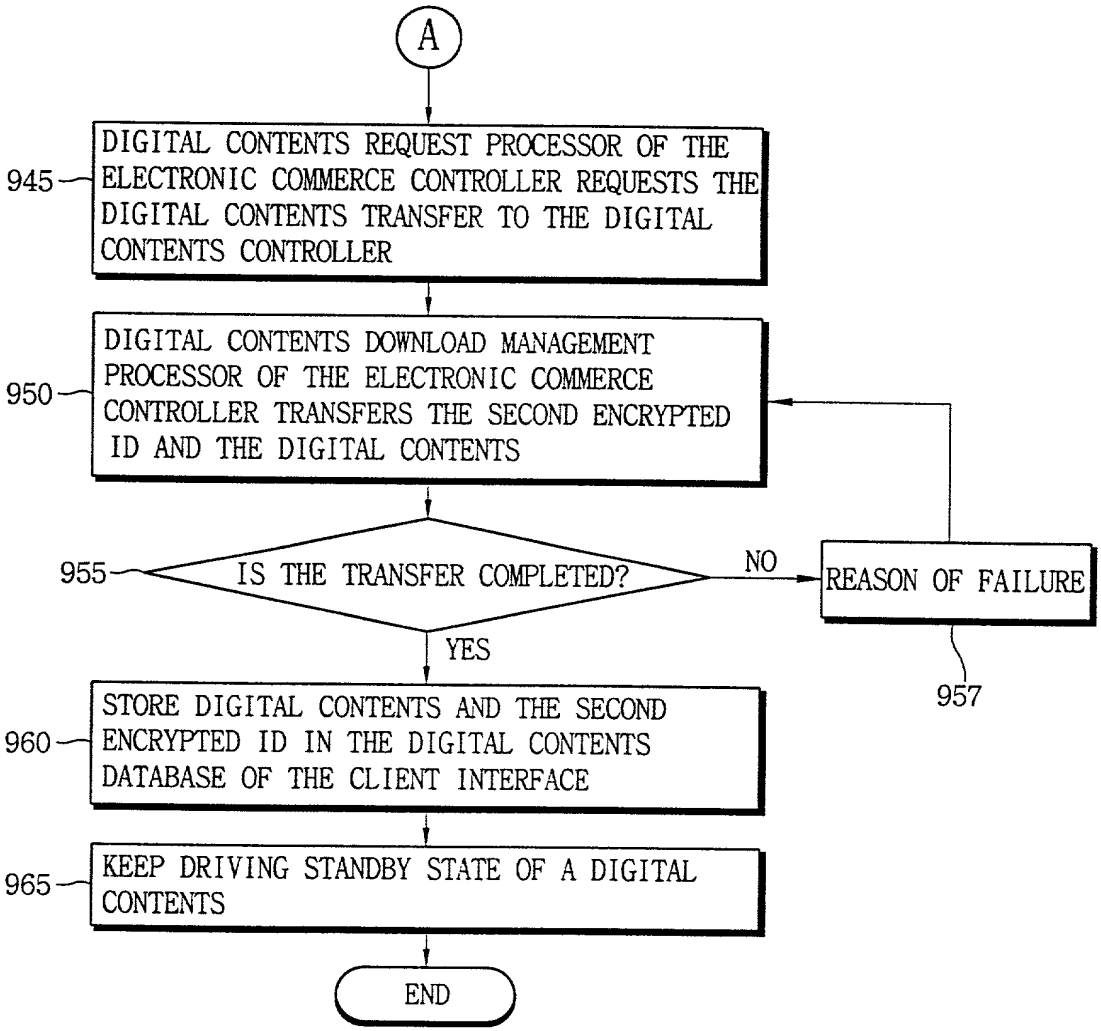

A
945
DIGITAL CONTENTS REQUEST PROCESSOR OF THE ELECTRONIC COMMERCE CONTROLLER REQUESTS THE DIGITAL CONTENTS TRANSFER TO THE DIGITAL CONTENTS CONTROLLER
950
DIGITAL CONTENTS DOWNLOAD MANAGEMENT PROCESSOR OF THE ELECTRONIC COMMERCE CONTROLLER TRANSFERS THE SECOND ENCRYPTED ID AND THE DIGITAL CONTENTS
955
IS THE TRANSFER COMPLETED?
NO
REASON OF FAILURE
957
YES
960
STORE DIGITAL CONTENTS AND THE SECOND ENCRYPTED ID IN THE DIGITAL CONTENTS DATABASE OF THE CLIENT INTERFACE
965
KEEP DRIVING STANDBY STATE OF A DIGITAL CONTENTS
END

FIG.20

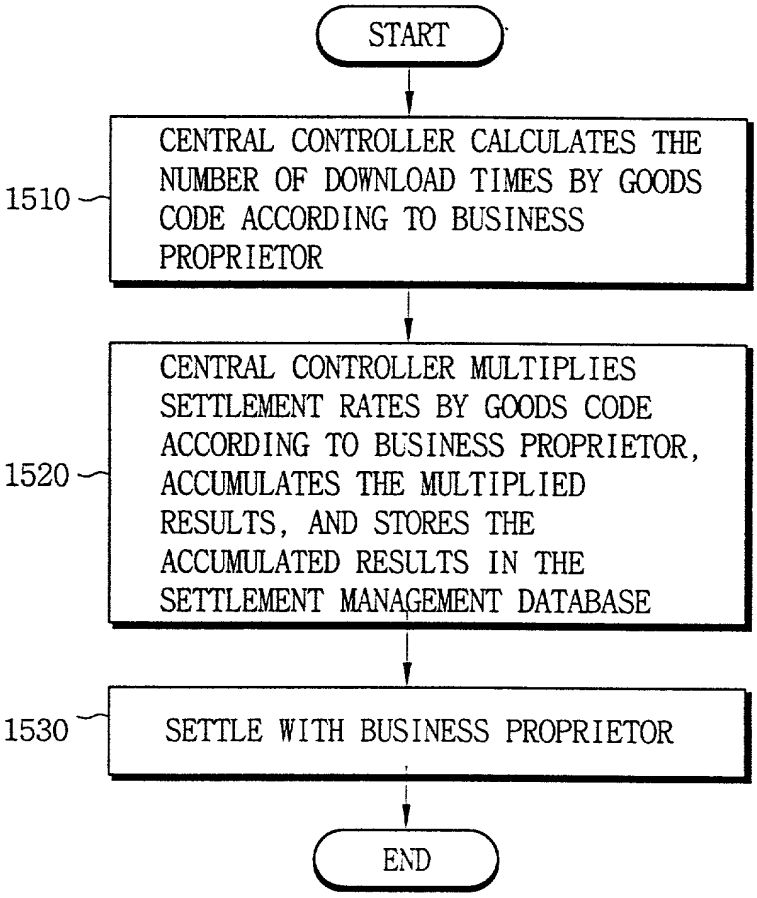

START
1510
CENTRAL CONTROLLER CALCULATES THE NUMBER OF DOWNLOAD TIMES BY GOODS CODE ACCORDING TO BUSINESS PROPRIETOR
1520
CENTRAL CONTROLLER MULTIPLIES SETTLEMENT RATES BY GOODS CODE ACCORDING TO BUSINESS PROPRIETOR, ACCUMULATES THE MULTIPLIED RESULTS, AND STORES THE ACCUMULATED RESULTS IN THE SETTLEMENT MANAGEMENT DATABASE
1530
SETTLE WITH BUSINESS PROPRIETOR
END

FIG.21

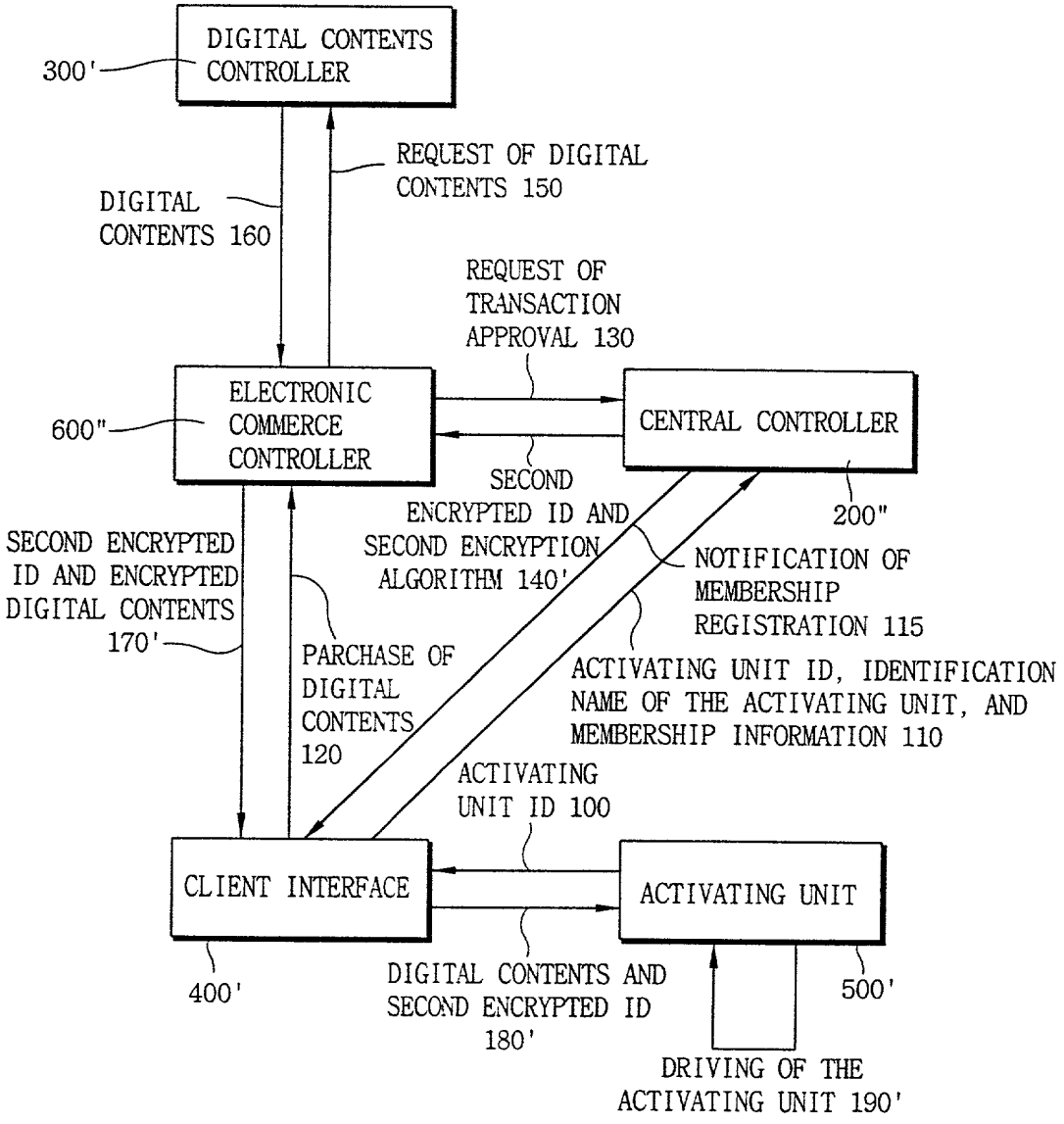

DIGITAL CONTENTS CONTROLLER
300'
REQUEST OF DIGITAL CONTENTS 150
DIGITAL CONTENTS 160
REQUEST OF TRANSACTION APPROVAL 130
ELECTRONIC COMMERCE CONTROLLER
600"
CENTRAL CONTROLLER
200"
SECOND ENCRYPTED ID AND SECOND ENCRYPTION ALGORITHM 140'
NOTIFICATION OF MEMBERSHIP REGISTRATION 115
SECOND ENCRYPTED ID AND ENCRYPTED DIGITAL CONTENTS 170'
PARCHASE OF DIGITAL CONTENTS 120
ACTIVATING UNIT ID, IDENTIFICATION NAME OF THE ACTIVATING UNIT, AND MEMBERSHIP INFORMATION 110
ACTIVATING UNIT ID 100
CLIENT INTERFACE
ACTIVATING UNIT
400'
DIGITAL CONTENTS AND SECOND ENCRYPTED ID 180'
500'
DRIVING OF THE ACTIVATING UNIT 190'

FIG.22

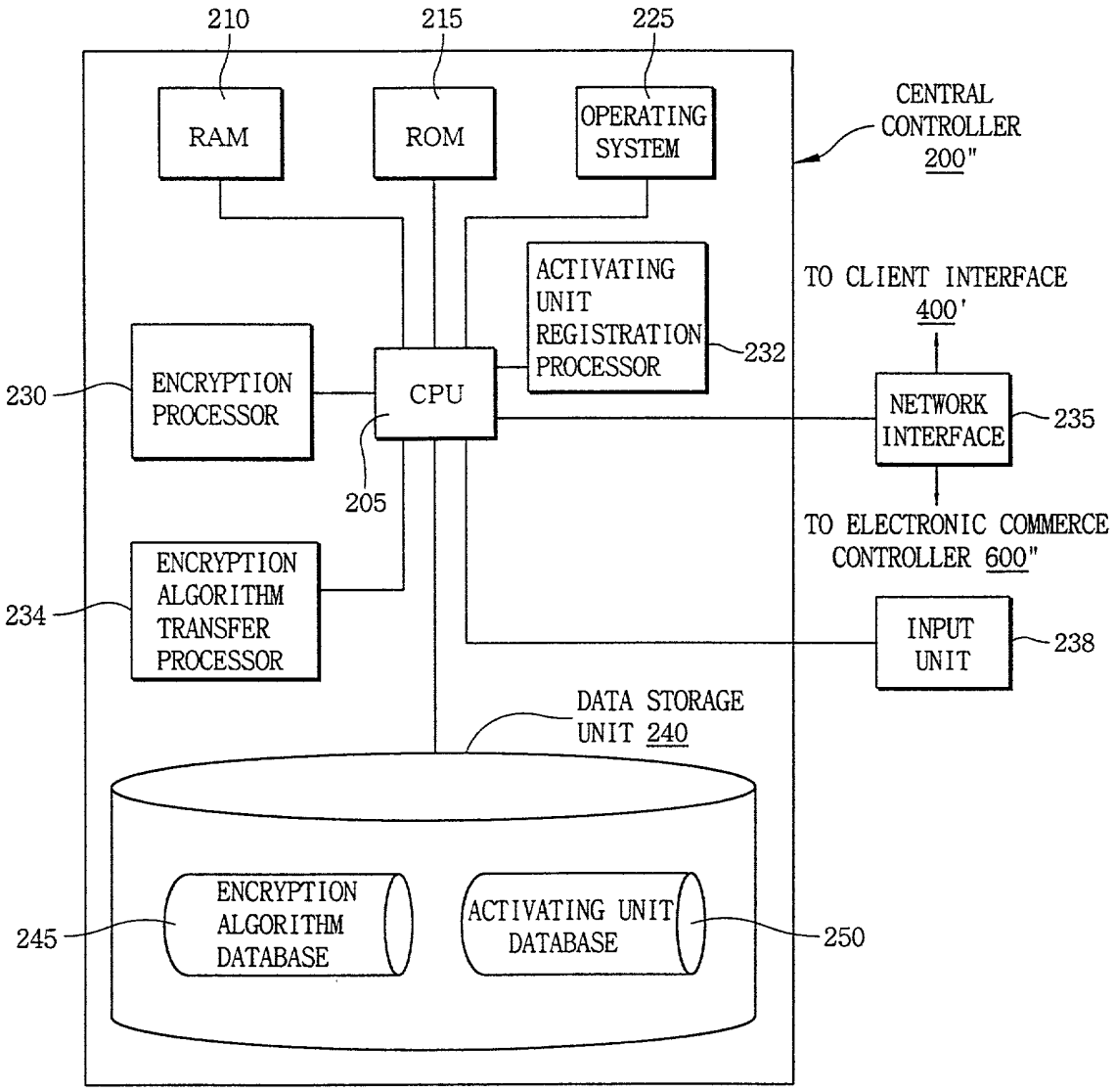

210
215
225
RAM
ROM
OPERATING SYSTEM
CENTRAL CONTROLLER 200"
ACTIVATING UNIT REGISTRATION PROCESSOR
232
TO CLIENT INTERFACE 400'
230
ENCRYPTION PROCESSOR
CPU
NETWORK INTERFACE
235
205
TO ELECTRONIC COMMERCE CONTROLLER 600"
ENCRYPTION ALGORITHM TRANSFER PROCESSOR
234
INPUT UNIT
238
DATA STORAGE UNIT 240
ENCRYPTION ALGORITHM DATABASE
245
ACTIVATING UNIT DATABASE
250

FIG.23

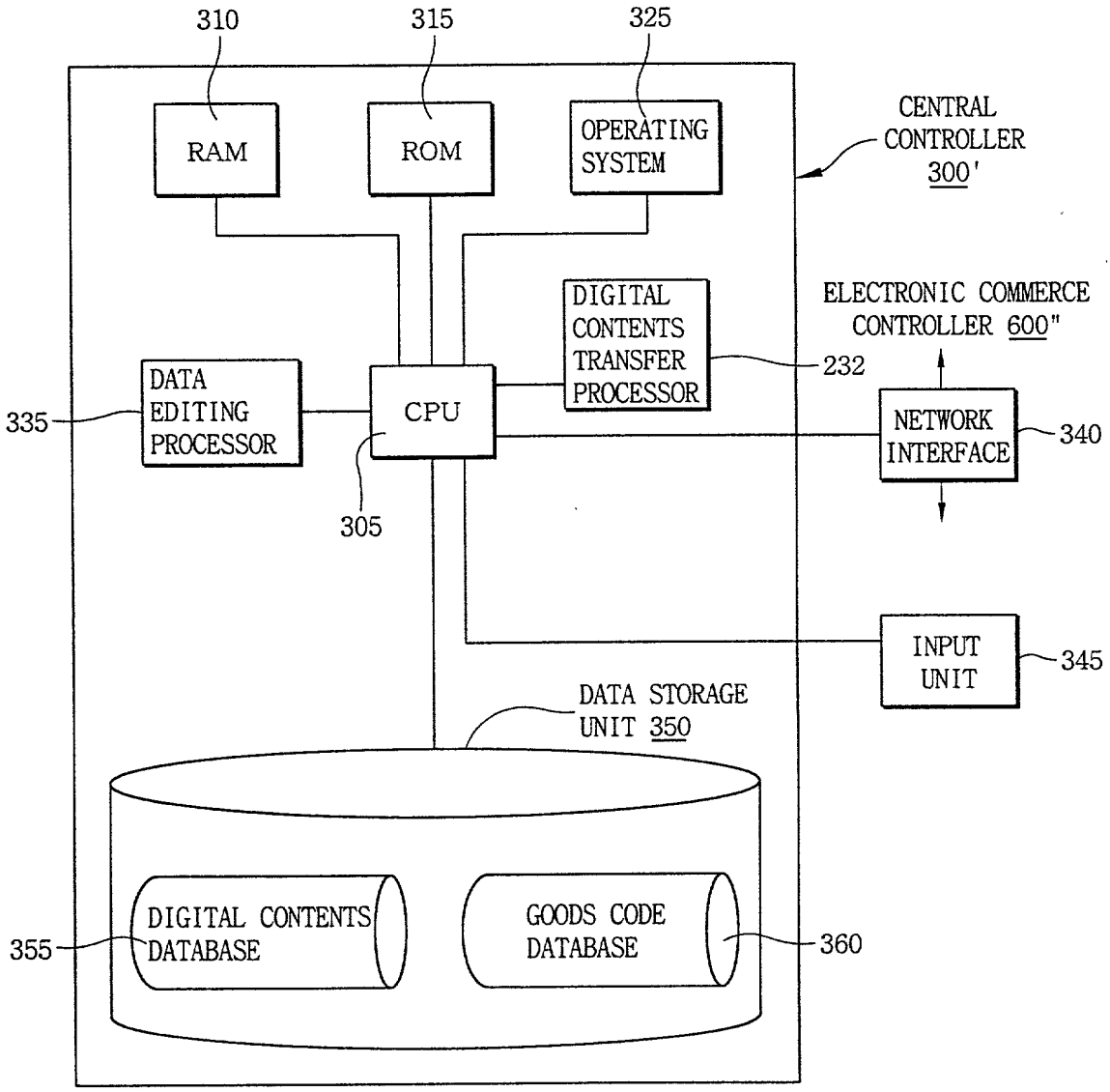
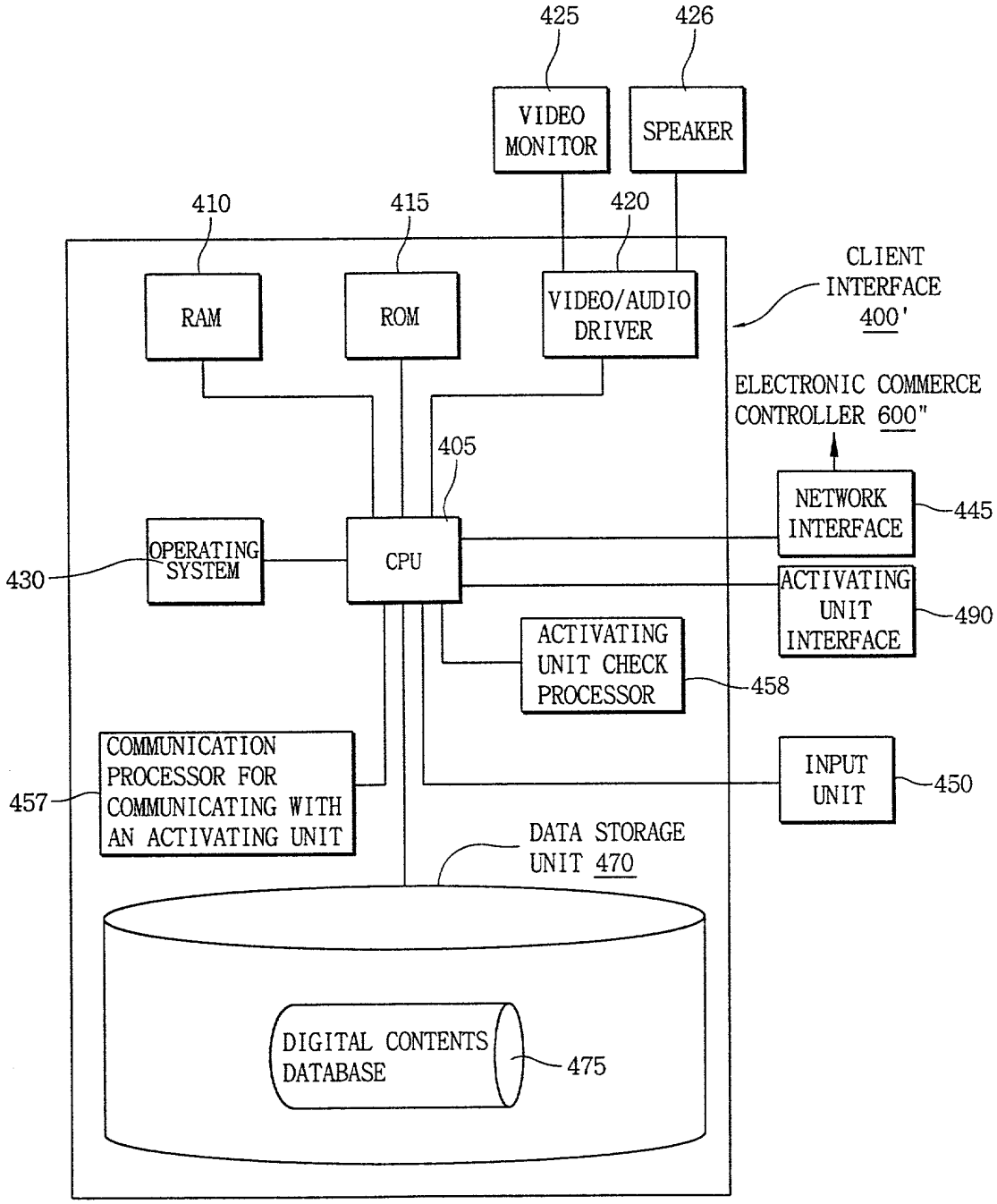

310
315
325
RAM
ROM
OPERATING SYSTEM
CENTRAL CONTROLLER 300'
DIGITAL CONTENTS TRANSFER PROCESSOR
232
ELECTRONIC COMMERCE CONTROLLER 600"
DATA EDITING PROCESSOR
335
CPU
NETWORK INTERFACE
340
305
INPUT UNIT
345
DATA STORAGE UNIT 350
DIGITAL CONTENTS DATABASE
355
GOODS CODE DATABASE
360

FIG.24



US 2004-0059754 A1

FIG.25

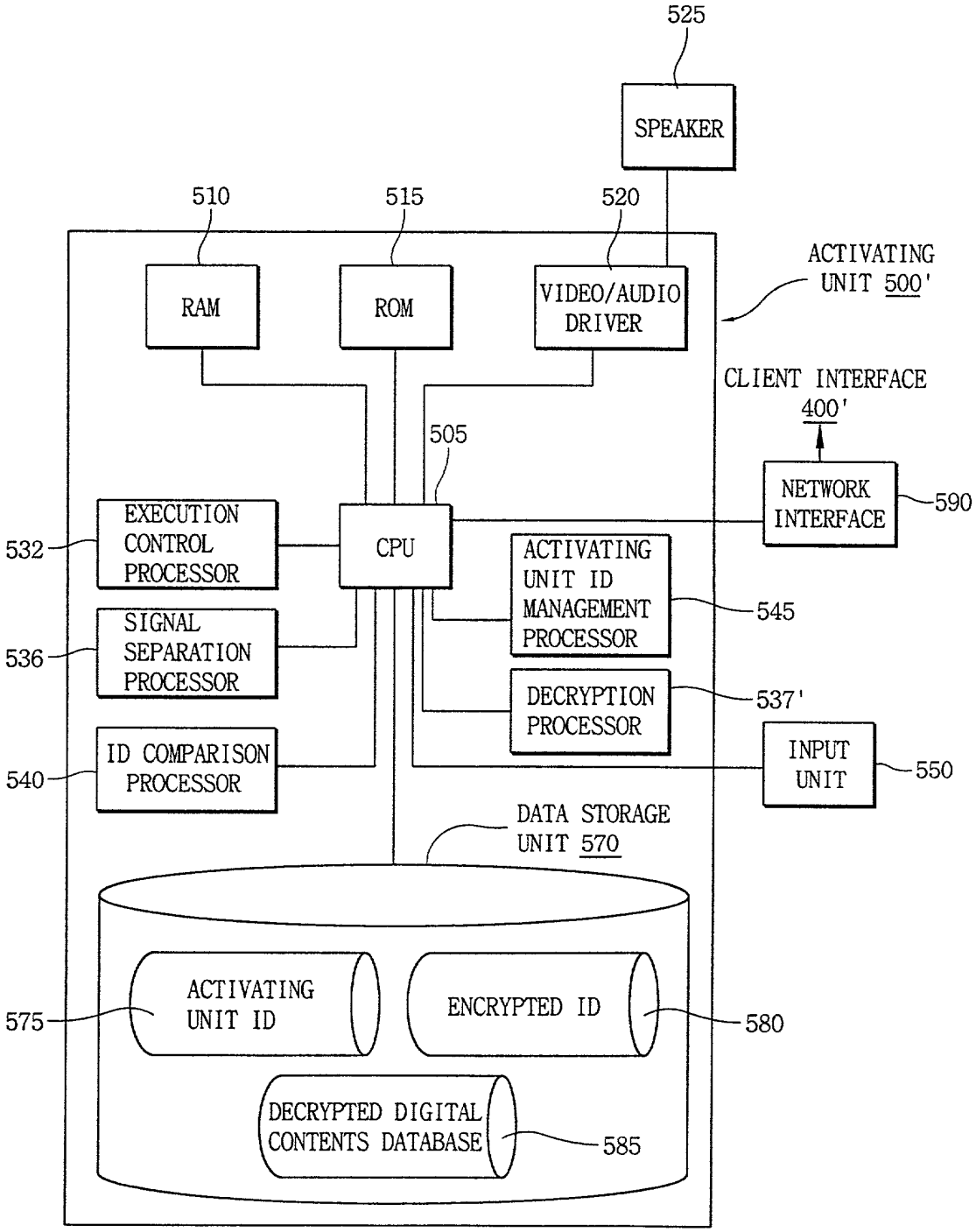
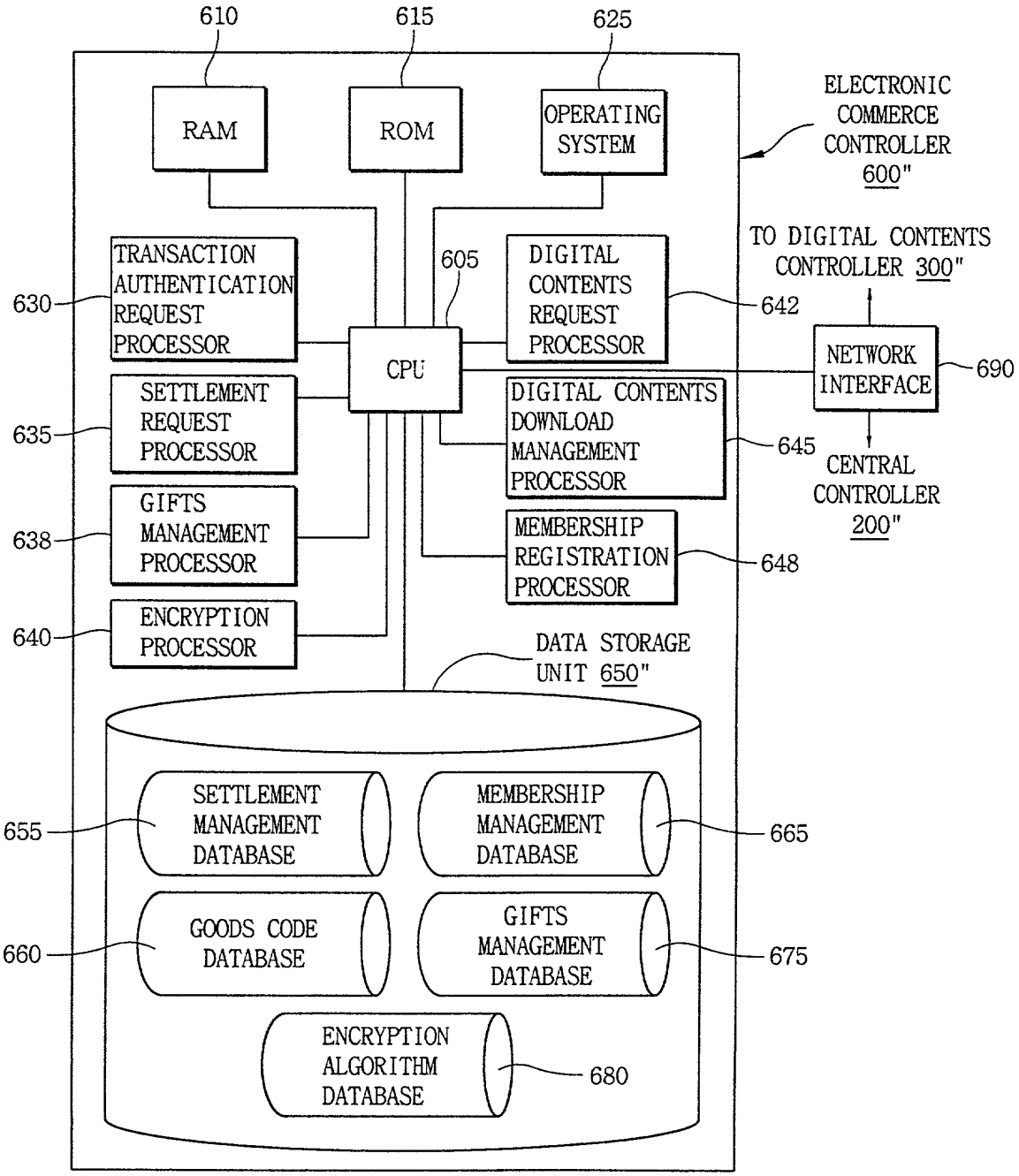

525
SPEAKER
510
515
520
RAM
ROM
VIDEO/AUDIO DRIVER
ACTIVATING UNIT 500'
CLIENT INTERFACE 400'
505
NETWORK INTERFACE
590
532
EXECUTION CONTROL PROCESSOR
CPU
ACTIVATING UNIT ID MANAGEMENT PROCESSOR
545
536
SIGNAL SEPARATION PROCESSOR
DECRYPTION PROCESSOR
537'
540
ID COMPARISON PROCESSOR
INPUT UNIT
550
DATA STORAGE UNIT 570
575
ACTIVATING UNIT ID
ENCRYPTED ID
580
DECRYPTED DIGITAL CONTENTS DATABASE
585

FIG.26



KR 10-0594694 B1

FIG.27A-1

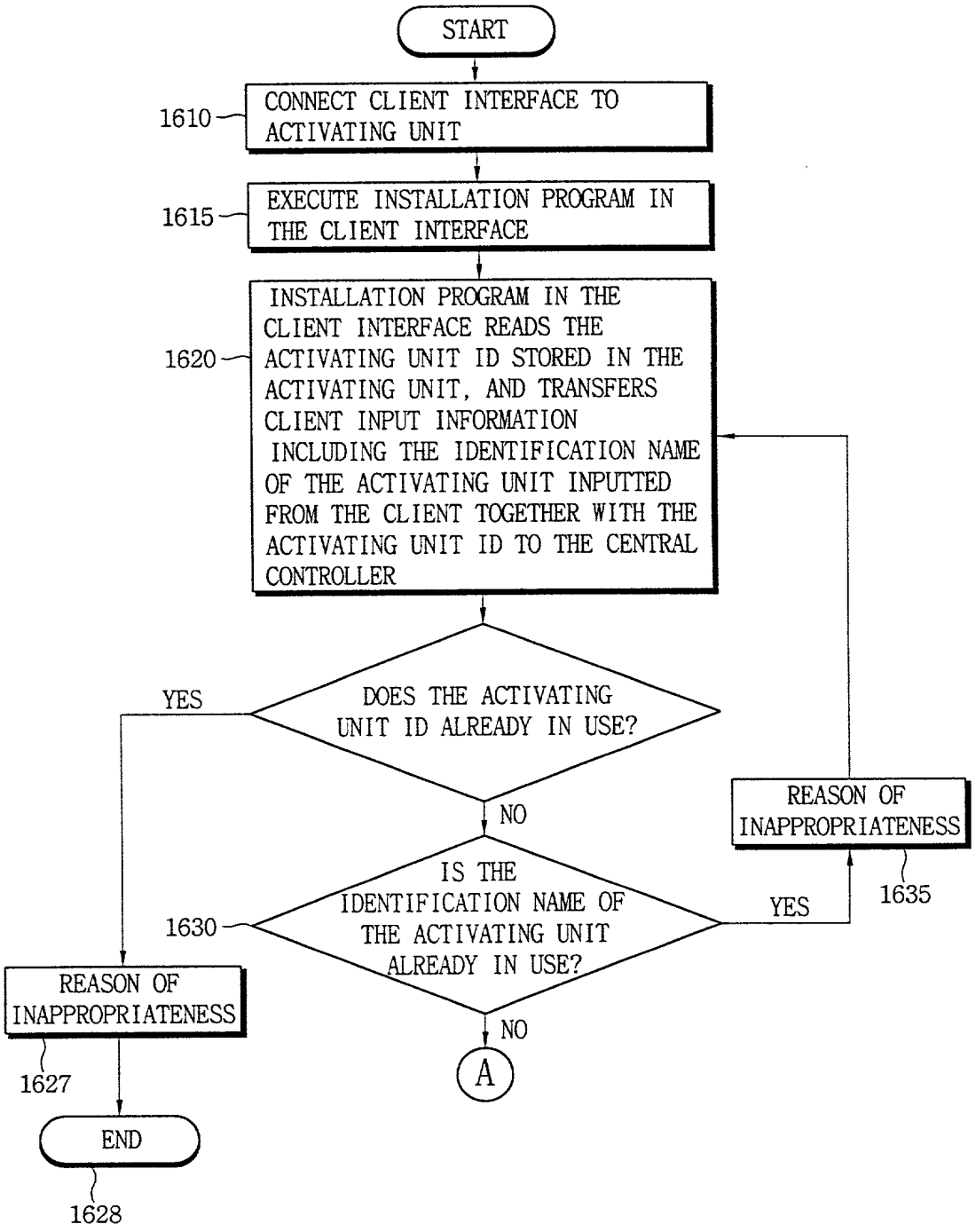

START
1610
CONNECT CLIENT INTERFACE TO ACTIVATING UNIT
1615
EXECUTE INSTALLATION PROGRAM IN THE CLIENT INTERFACE
1620
INSTALLATION PROGRAM IN THE CLIENT INTERFACE READS THE ACTIVATING UNIT ID STORED IN THE ACTIVATING UNIT, AND TRANSFERS CLIENT INPUT INFORMATION INCLUDING THE IDENTIFICATION NAME OF THE ACTIVATING UNIT INPUTTED FROM THE CLIENT TOGETHER WITH THE ACTIVATING UNIT ID TO THE CENTRAL CONTROLLER
DOES THE ACTIVATING UNIT ID ALREADY IN USE?
YES
NO
1630
IS THE IDENTIFICATION NAME OF THE ACTIVATING UNIT ALREADY IN USE?
YES
NO
REASON OF INAPPROPRIATENESS
1635
REASON OF INAPPROPRIATENESS
1627
END
1628
A

FIG.27A-2

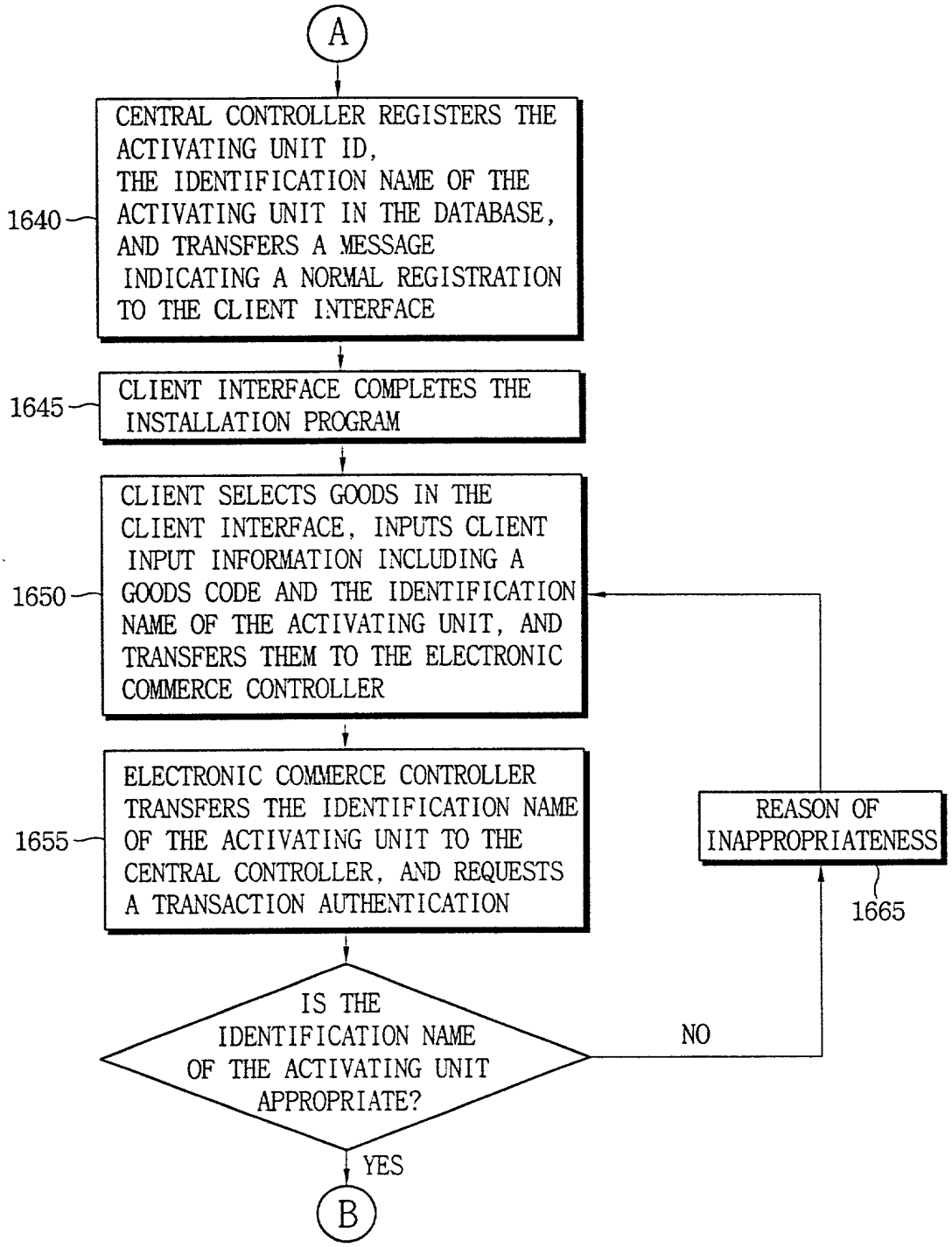

A
CENTRAL CONTROLLER REGISTERS THE ACTIVATING UNIT ID, THE IDENTIFICATION NAME OF THE ACTIVATING UNIT IN THE DATABASE, AND TRANSFERS A MESSAGE INDICATING A NORMAL REGISTRATION TO THE CLIENT INTERFACE
1640
CLIENT INTERFACE COMPLETES THE INSTALLATION PROGRAM
1645
CLIENT SELECTS GOODS IN THE CLIENT INTERFACE, INPUTS CLIENT INPUT INFORMATION INCLUDING A GOODS CODE AND THE IDENTIFICATION NAME OF THE ACTIVATING UNIT, AND TRANSFERS THEM TO THE ELECTRONIC COMMERCE CONTROLLER
1650
ELECTRONIC COMMERCE CONTROLLER TRANSFERS THE IDENTIFICATION NAME OF THE ACTIVATING UNIT TO THE CENTRAL CONTROLLER, AND REQUESTS A TRANSACTION AUTHENTICATION
1655
IS THE IDENTIFICATION NAME OF THE ACTIVATING UNIT APPROPRIATE?
NO
REASON OF INAPPROPRIATENESS
1665
YES
B

FIG.27B-1

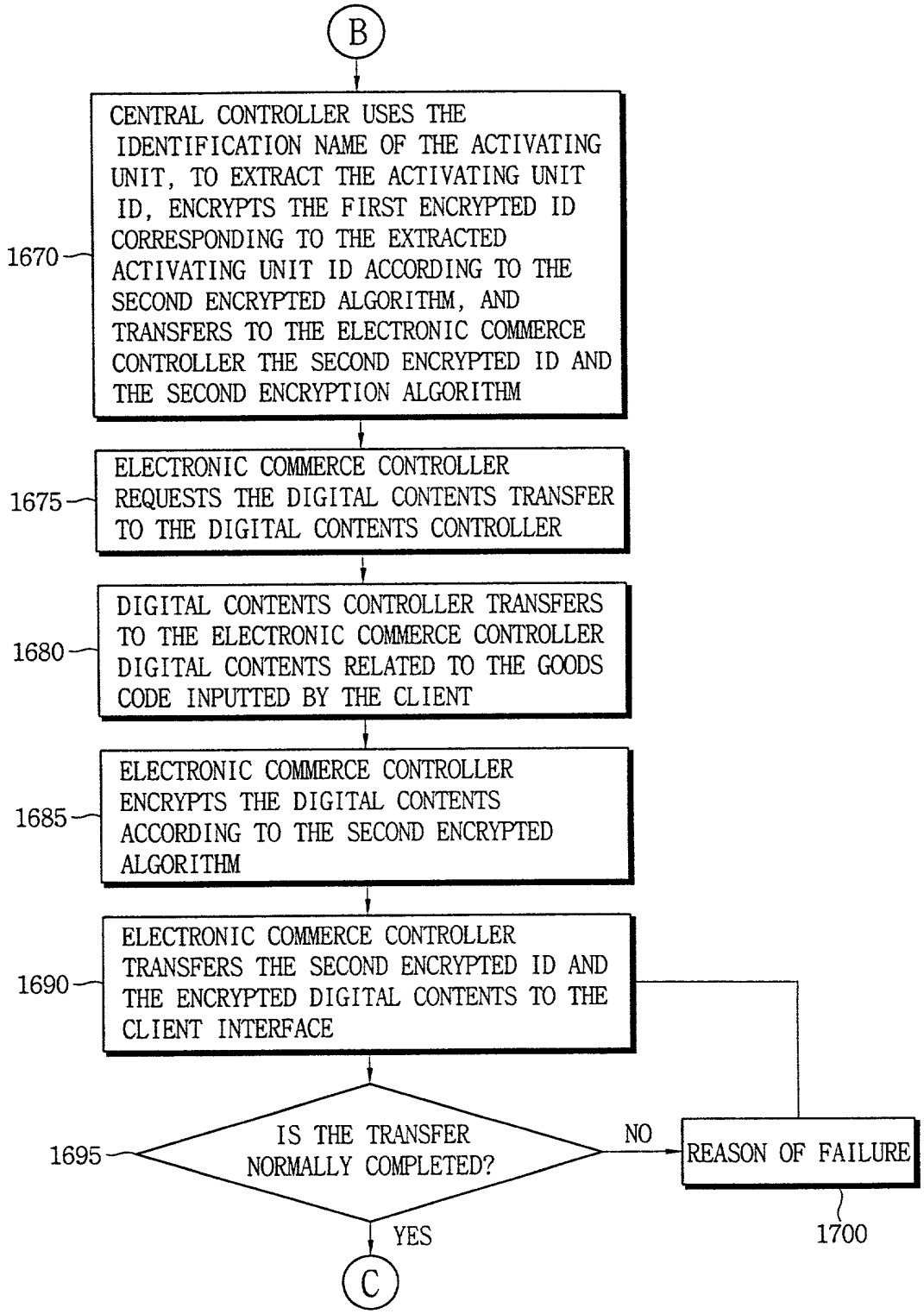
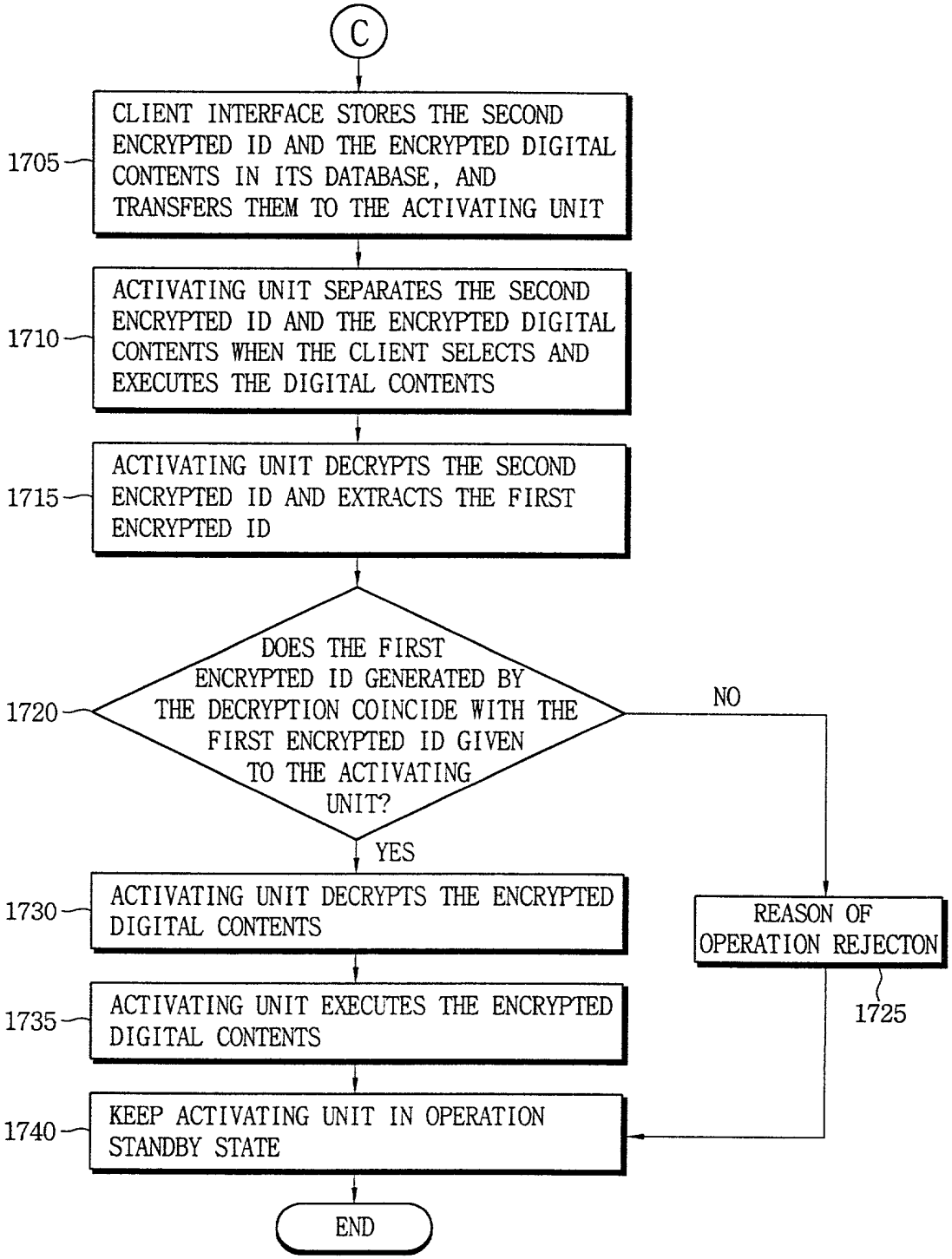

B
CENTRAL CONTROLLER USES THE IDENTIFICATION NAME OF THE ACTIVATING UNIT, TO EXTRACT THE ACTIVATING UNIT ID, ENCRYPTS THE FIRST ENCRYPTED ID CORRESPONDING TO THE EXTRACTED ACTIVATING UNIT ID ACCORDING TO THE SECOND ENCRYPTED ALGORITHM, AND TRANSFERS TO THE ELECTRONIC COMMERCE CONTROLLER THE SECOND ENCRYPTED ID AND THE SECOND ENCRYPTION ALGORITHM
1670
ELECTRONIC COMMERCE CONTROLLER REQUESTS THE DIGITAL CONTENTS TRANSFER TO THE DIGITAL CONTENTS CONTROLLER
1675
DIGITAL CONTENTS CONTROLLER TRANSFERS TO THE ELECTRONIC COMMERCE CONTROLLER DIGITAL CONTENTS RELATED TO THE GOODS CODE INPUTTED BY THE CLIENT
1680
ELECTRONIC COMMERCE CONTROLLER ENCRYPTS THE DIGITAL CONTENTS ACCORDING TO THE SECOND ENCRYPTED ALGORITHM
1685
ELECTRONIC COMMERCE CONTROLLER TRANSFERS THE SECOND ENCRYPTED ID AND THE ENCRYPTED DIGITAL CONTENTS TO THE CLIENT INTERFACE
1690
IS THE TRANSFER NORMALLY COMPLETED?
1695
NO
REASON OF FAILURE
1700
YES
C

FIG.27B-2



Patent-No.6,954,859

FIG. 28

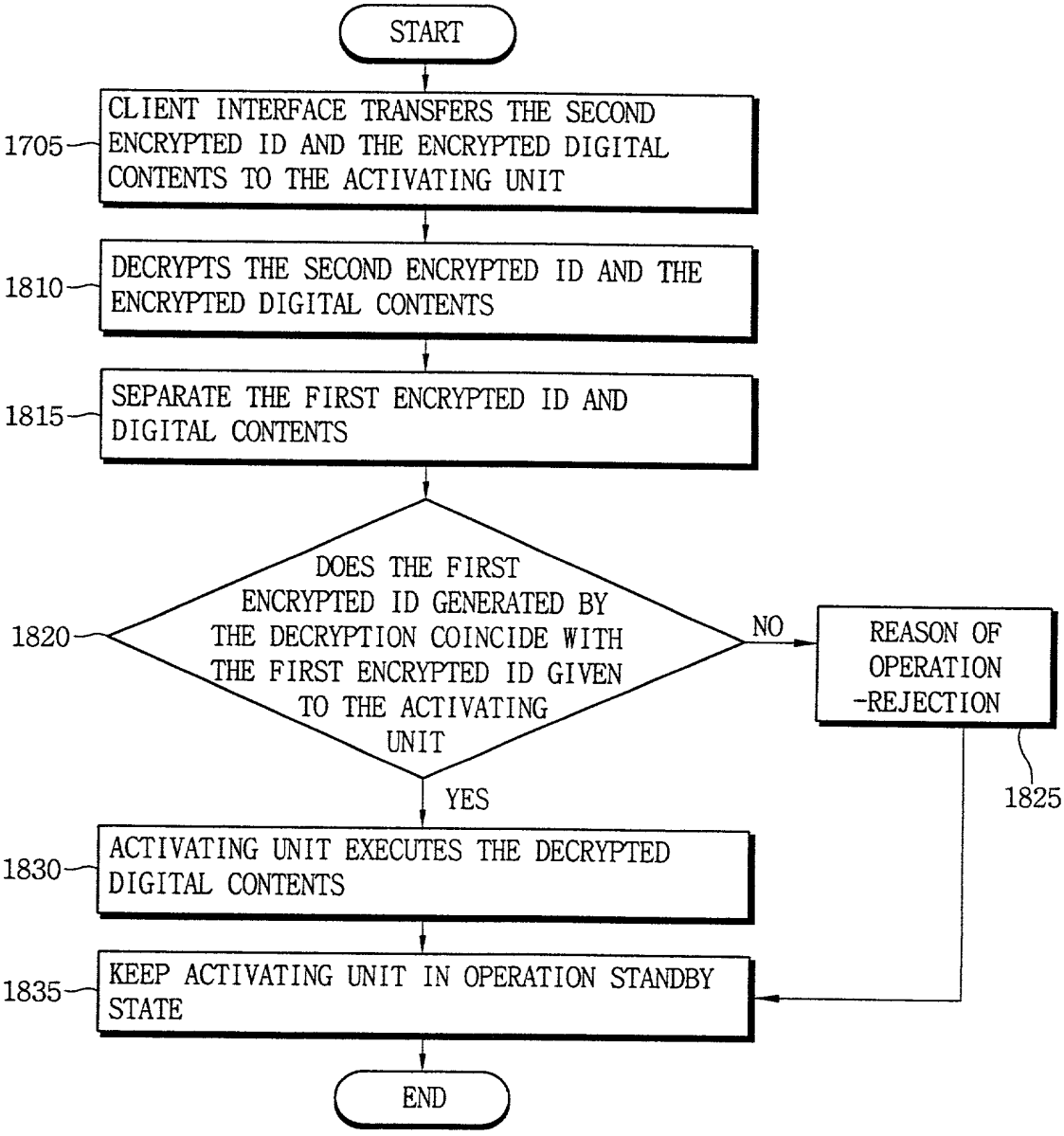

START
1705
CLIENT INTERFACE TRANSFERS THE SECOND ENCRYPTED ID AND THE ENCRYPTED DIGITAL CONTENTS TO THE ACTIVATING UNIT
1810
DECRYPTS THE SECOND ENCRYPTED ID AND THE ENCRYPTED DIGITAL CONTENTS
1815
SEPARATE THE FIRST ENCRYPTED ID AND DIGITAL CONTENTS
1820
DOES THE FIRST ENCRYPTED ID GENERATED BY THE DECRYPTION COINCIDE WITH THE FIRST ENCRYPTED ID GIVEN TO THE ACTIVATING UNIT
NO
REASON OF OPERATION -REJECTION
1825
YES
1830
ACTIVATING UNIT EXECUTES THE DECRYPTED DIGITAL CONTENTS
1835
KEEP ACTIVATING UNIT IN OPERATION STANDBY STATE
END

FIG.29

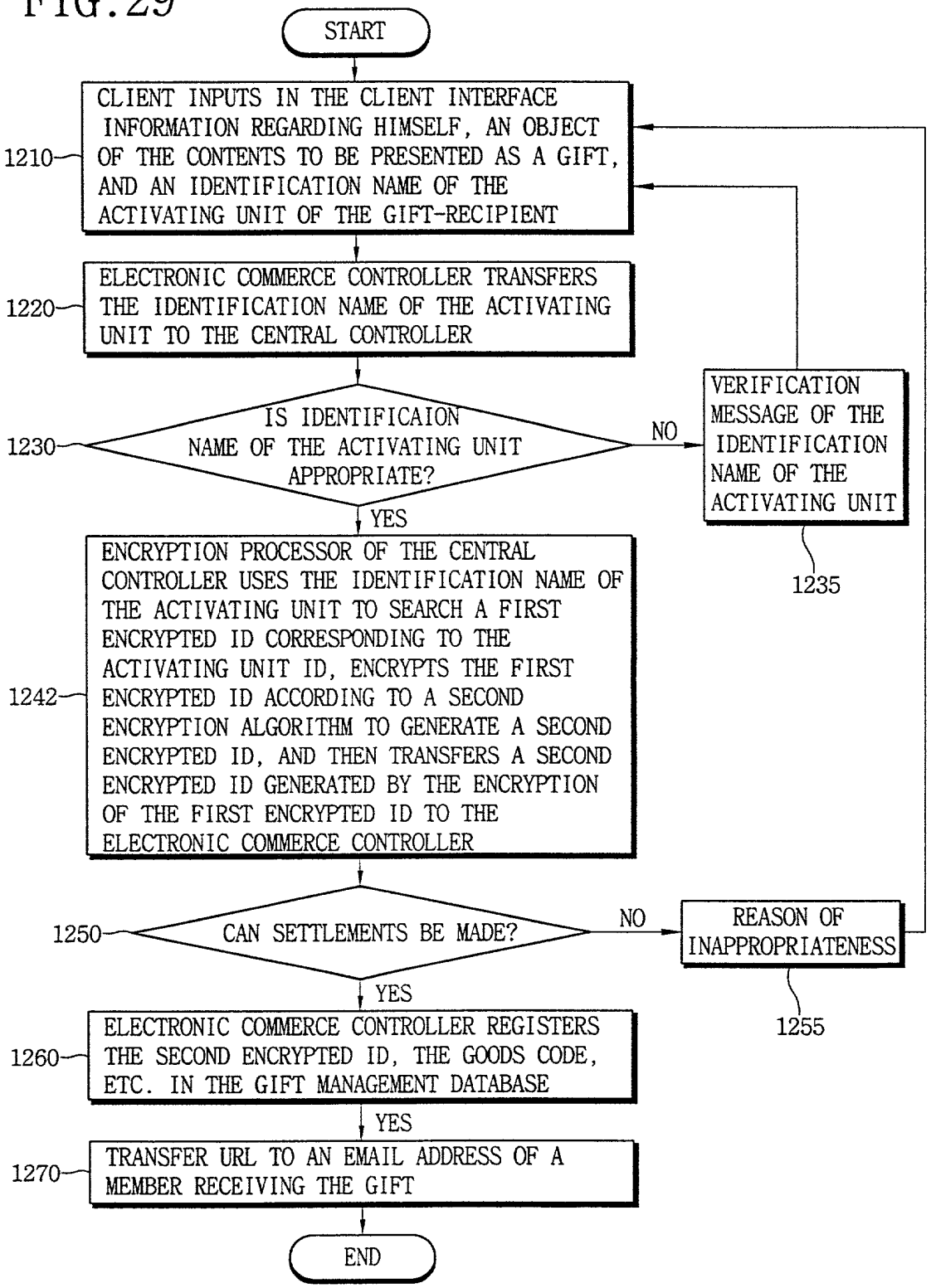
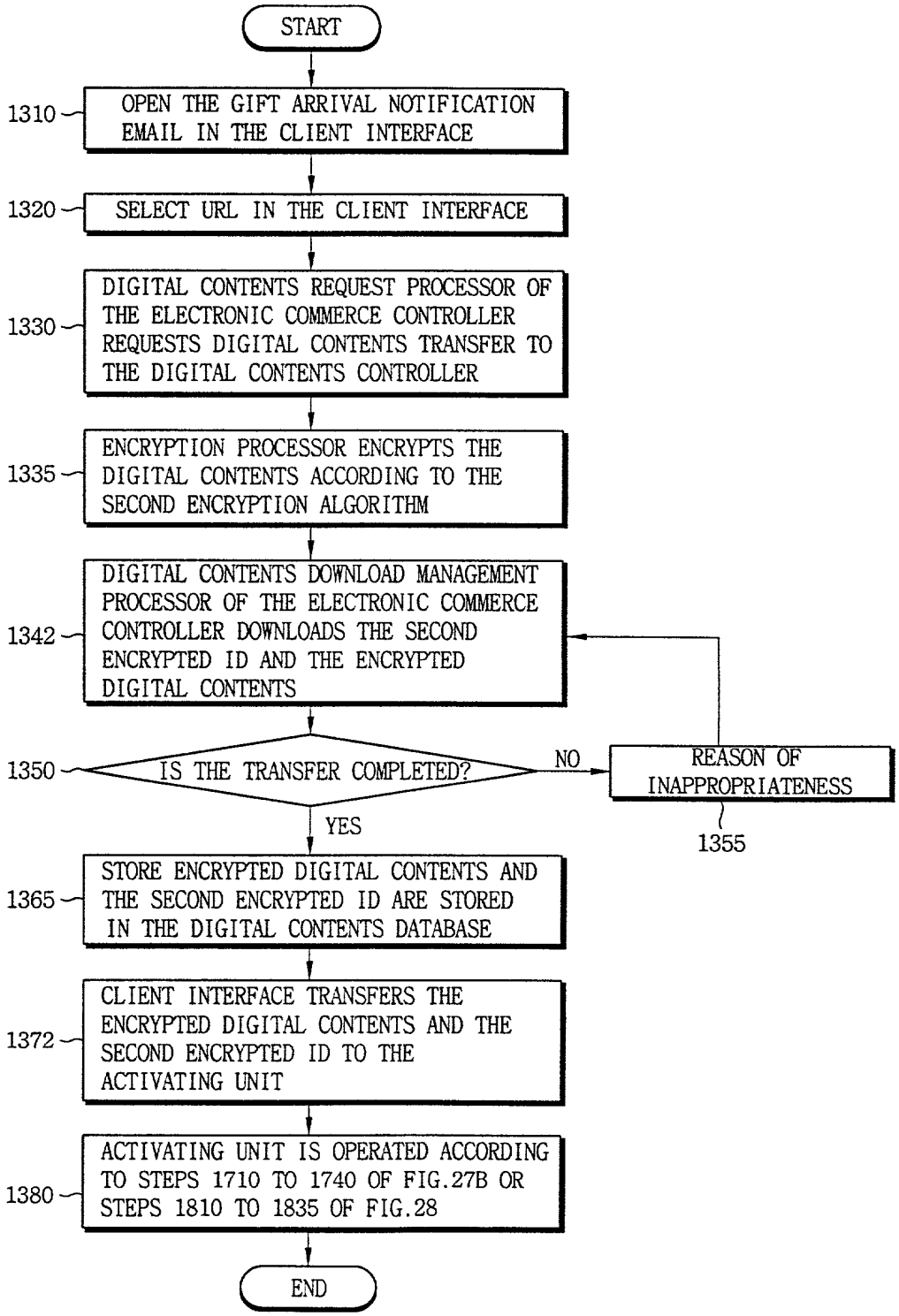

START
CLIENT INPUTS IN THE CLIENT INTERFACE INFORMATION REGARDING HIMSELF, AN OBJECT OF THE CONTENTS TO BE PRESENTED AS A GIFT, AND AN IDENTIFICATION NAME OF THE ACTIVATING UNIT OF THE GIFT-RECIPIENT
1210
ELECTRONIC COMMERCE CONTROLLER TRANSFERS THE IDENTIFICATION NAME OF THE ACTIVATING UNIT TO THE CENTRAL CONTROLLER
1220
IS IDENTIFICAION NAME OF THE ACTIVATING UNIT APPROPRIATE?
1230
NO
VERIFICATION MESSAGE OF THE IDENTIFICATION NAME OF THE ACTIVATING UNIT
1235
YES
ENCRYPTION PROCESSOR OF THE CENTRAL CONTROLLER USES THE IDENTIFICATION NAME OF THE ACTIVATING UNIT TO SEARCH A FIRST ENCRYPTED ID CORRESPONDING TO THE ACTIVATING UNIT ID, ENCRYPTS THE FIRST ENCRYPTED ID ACCORDING TO A SECOND ENCRYPTION ALGORITHM TO GENERATE A SECOND ENCRYPTED ID, AND THEN TRANSFERS A SECOND ENCRYPTED ID GENERATED BY THE ENCRYPTION OF THE FIRST ENCRYPTED ID TO THE ELECTRONIC COMMERCE CONTROLLER
1242
CAN SETTLEMENTS BE MADE?
1250
NO
REASON OF INAPPROPRIATENESS
1255
YES
ELECTRONIC COMMERCE CONTROLLER REGISTERS THE SECOND ENCRYPTED ID, THE GOODS CODE, ETC. IN THE GIFT MANAGEMENT DATABASE
1260
YES
TRANSFER URL TO AN EMAIL ADDRESS OF A MEMBER RECEIVING THE GIFT
1270
END

FIG.30


START
1310
OPEN THE GIFT ARRIVAL NOTIFICATION EMAIL IN THE CLIENT INTERFACE
1320
SELECT URL IN THE CLIENT INTERFACE
1330
DIGITAL CONTENTS REQUEST PROCESSOR OF THE ELECTRONIC COMMERCE CONTROLLER REQUESTS DIGITAL CONTENTS TRANSFER TO THE DIGITAL CONTENTS CONTROLLER
1335
ENCRYPTION PROCESSOR ENCRYPTS THE DIGITAL CONTENTS ACCORDING TO THE SECOND ENCRYPTION ALGORITHM
1342
DIGITAL CONTENTS DOWNLOAD MANAGEMENT PROCESSOR OF THE ELECTRONIC COMMERCE CONTROLLER DOWNLOADS THE SECOND ENCRYPTED ID AND THE ENCRYPTED DIGITAL CONTENTS
1350
IS THE TRANSFER COMPLETED?
NO
REASON OF INAPPROPRIATENESS
1355
YES
1365
STORE ENCRYPTED DIGITAL CONTENTS AND THE SECOND ENCRYPTED ID ARE STORED IN THE DIGITAL CONTENTS DATABASE
1372
CLIENT INTERFACE TRANSFERS THE ENCRYPTED DIGITAL CONTENTS AND THE SECOND ENCRYPTED ID TO THE ACTIVATING UNIT
1380
ACTIVATING UNIT IS OPERATED ACCORDING TO STEPS 1710 TO 1740 OF FIG.27B OR STEPS 1810 TO 1835 OF FIG.28
END